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Mac ADDICT

26

OCT/98

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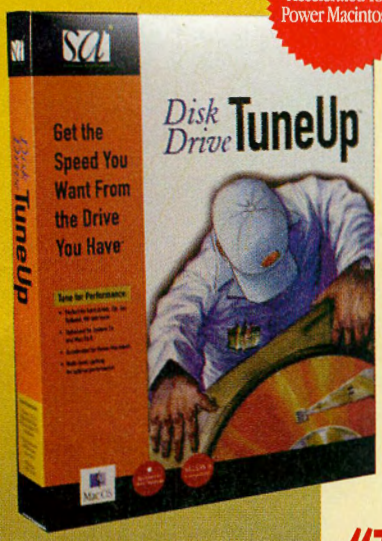
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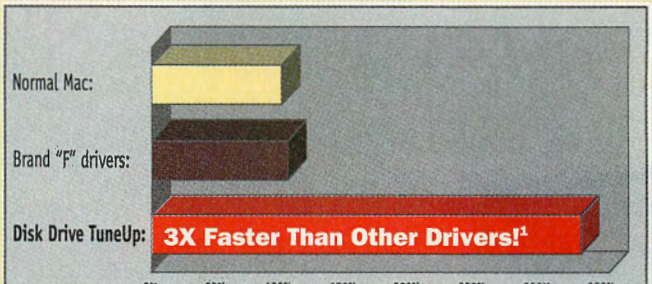
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1 Ziff Davis, MacBench® 3.0 scores using as Iomega® Zip® drive on an Apple Macintosh Performa 6400/180 running Mac OS 8.0 with 24 MB RAM and VM on. All products used in this test were shipping versions available to the general public. This test and its results were not verified by Ziff-Davis. Individual gains depend on the type of media used, caching parameters established and system specifics.

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SPARE CHANGE, buddy? Hey! Don't walk away! I know you hear me!

OCTOBER 1998

MacADDICT 26

highlights

24 Toolbox Treats

Yeek, they're scary. So scary, we went through a whole case of Depends while editing this feature. We're talking about the five costumes you can wear as you prepare your Mac for Halloween. We give you the tools on The Disc and show you how to use them.

BY DAVID REYNOLDS

30 Movie Magic

Ever dream of showing up that snotty Spielberg or wowing the pants off that Lucas fellow? With this special effects article, a Mac, a garage bluescreen, and the right software, you too can make a hit blockbuster. **BY RAF ANZOVIN**

40 My Lousy Summer with Windows 98

Windows 98 has been released to a resounding "Who cares?" but the famous hat-fanatic Mac author Robin Williams tells why you should fear and loathe it. **BY ROBIN WILLIAMS**

power up

72 Dreamweaver's DHTML Dynamics

Now this is cool—using dynamic HTML for real interactivity, instead of just hyperlinks. Follow our how-to and you'll be slinging Web page elements around in no time.

74 How to Post a FileMaker Database on the Web

FileMaker Pro databases can be published on the Web—we've been able to do this for some time. Problem is, no one knew how. Until now. Step by step, we show you how to post your databases online.

76 Learn from the Web Pros

Web spelunker Joe Holmes dug deeply into the Amazon.com Web site to unearth some of the secrets of its construction. We asked him to share his findings with you, and, nice guy that he is, he did.



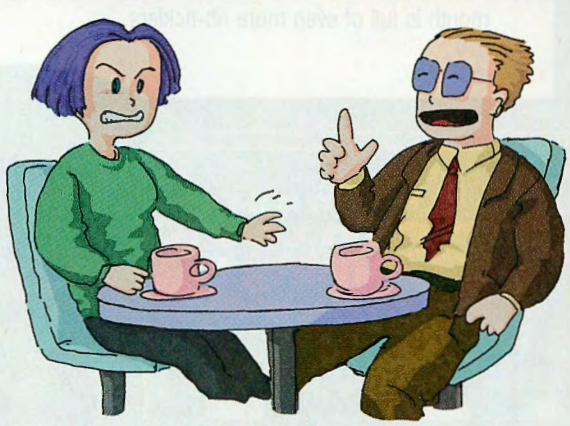
WATCH AS MARK does the amazing flaming T-shirt trick without getting burned.



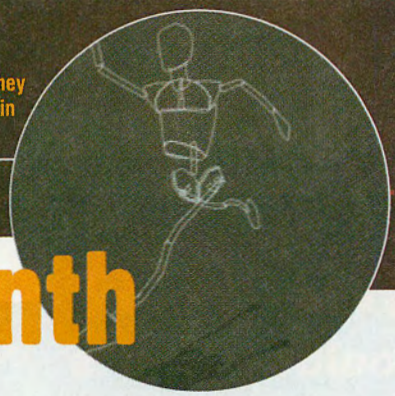
THE ONE GOOD USE for that particular box of software. Just mind the burning plastic.

ATTENTION MACADDICT shoppers! Our tricked-out *Blue Light Special*® pumpkin was provided by Olivier Wolfson.





DARING DOODLER MARK SIMMONS quits cartooning, but not before giving you one last laugh.



HEY! TAXI! Why won't they stop? Is it my lack of skin and facial features?

every month

12 Editor's Note
Dave's daydreams starring Dave's dad, Steven Spielberg, Kenneth Starr, and Steve Jobs.

14 Letters
Readers call it the best literary parody of all time. What are they raving about? Find out or miss out.

18 Get Info
Apple's Q3 financials are out, and they look pretty darned good. We'll show you why. Plus, we deliver another installment of the Microsoft Deathwatch.

22 Cravings
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44 Reviews
These things kick butt—or not. We rate and review Unreal, the high-end PowerBook G3, Fireworks, Director 6.5, and a slew of other products.

78 Fun & Games
She's on the way! Lara Croft, everyone's favorite freakishly proportioned action heroine, is on the way to the Mac in Tomb Raider II. We give you a sneak peek!

80 Ask Us
When you ask us, we feel compelled to answer. That, and count the stairs we climb over and over. Find out if old-style L2 cache really helps G3 performance, and learn how to keep your Mac's volume down.

104 Shut Down
You thought the last one was funny—you were right. It was. But this month is full of even more rib-ticklers.





OMIGOD, SHE'S FALLEN in the water! Oh, wait. Silicone floats.

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Dude, like that trip to Adobe was so interesting. Where's my beer? *Chicken Butt* has left the building. Have fun living in the desert!



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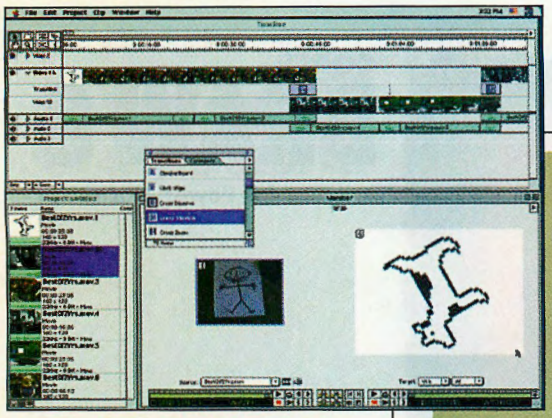
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the disc



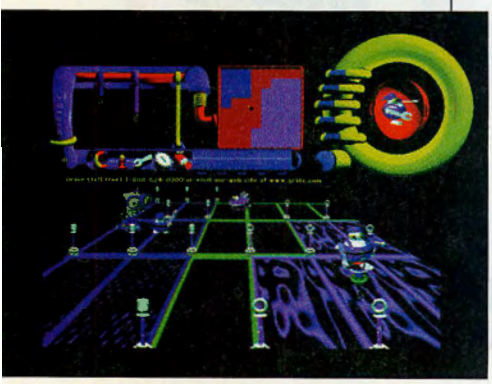
ANYONE CAN MAKE MOVIES in Premiere—even us!



YOU WON'T FIND CUTE CURTAINS or doilies in these apartments.



WOW! THE HIGHLY ANTICIPATED REDESIGN of our *MacAddict* Tour is complete! Take the tour of this month's goods. We glued it together with Realbasic.



CONTROL YOUR ROBOT ARMY as you smash and hack the enemy to pieces!

Fresh off the press... THE NEW DISC!





highlights

Adobe Premiere 5.0

Lights! Camera! Action! If you've got stars in your eyes or excessively long home videos (you know who you are—we've all suffered watching them!), then here's a program worth checking out. Capture video and audio directly into your computer via your video camera or VCR, then fully edit it into broadcast-quality movies.

Manhattan Apartment Hunter

What lies behind closed doors in this upcoming adventure game from IWS Interactive? Plenty of mystery and intrigue, as you venture through the Big Apple, looking for an apartment to rent. This sneak peek at a much greater game-in-progress offers nice 3D rendered graphics and some chilling music.

Realbasic F4

Okay kids, you asked for it—you got it! Check out our new *MacAddict* Tour interface and this demo on the CD and see what Real Software's Realbasic can do. This object-oriented program makes it easy to create interactive applications without the hassle of learning complex language programming. Try it out for yourself. It also runs applications much faster and with less system requirements than that other program we used to use.

Gridz 1.2

Die, ToolBot! Die! This awesome arcade-style game pits brain (yours) against brawn (the opposing ToolBots) in your quest to take NetSpace away from the enemy ToolBots. Capture grid space and try to destroy the enemy with the help of your ToolBot Workers, Strikers, and Hackers. This great demo includes NetPlay, which enables you to challenge others in your quest for total domination.



MAX AND DENNIS GO POSTAL in *Escape from MacAddict*, this month's staff video by Raf Anzovin.

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Audio
Clixsounds, Radicalerts, Win95 Elvis Sound

Communication
AlwaysONline 1.7, Anarchie 2.0.1, BetterTelnet 1.2.2, Combadge 1.0.1, Easy Chat b1.0, FreePPP 2.6.2, GearBox 1.5, GPSy 3.15 demo, Hogwasher 1.0.2 demo, Hotline Client 1.2.3, Hotline FTP Server 1.0 demo, InCDius 1.1, Internet Explorer 4.0.1, IPNetMonitor 2.1c1, IPNetRouter 1.2.1, MacCDDB 0.8.6, MacINIT Strings 2.1, MacTCPWatcher 2.0, MacWaves 2.1.3, MT NewsWatcher 2.4.4, Netscape Communicator 4.5, Netscape Navigator 4.05, NotifyMail 3.1, OT Advanced Tuner, OTSessionWatcher 1.0.1, PictureSnooper 1.5.1, PowerMail 2.0.2 demo, PPPremier Timer 2.0.1, URL Manager Pro, WhatRoute 1.5b15

Design & Graphics
Acrobat Reader 3.0.1, Adobe Photoshop 5.0 demo, Animation Maker 3.1 demo, BeyondPress 4.0 demo, BladePro 2.09, BlueBox 1.0, Callisto 1.1, ColorBox, CyberStudio Pro 3.1 demo, DesignWorks 4.0.1 demo, DeskTop Zones, Dreamweaver 1.2 demo, FeatherGIF 1.9.6, Fractal Domains 1.2.3, FreeHand 8.0 demo, Get-a-Mac, GraphicConverter 3.3.1, Graphite 1.0.6, IconFactory Originals, India Ink 1.4.6, MacAddict Schemes, Made With Macintosh, PageMill 2.0 demo, Preflight Pro 2.0 demo, Propaganda, RenderBoy 2.0.1, smartGIF 1.0.2, Tesselation 1.25, The Mutatron 1.1, Windows 95 Crashes

Development
Adventure Creator 2.0, Director 6.0 demo, Jon's Commands 2.0.5, Realbasic F4 demo, VSE RB Utilities Plugin 1.0.1 demo

Fun & Games
Burning Monkey Solitaire, Cave Fox 2001 1.1, Codebook 3.0.1, d-thing 1.0, Domain 1.0, Ebola Monkey Bingo 1.0.1, EV Overlord Suite, Farkle 2.5.1, Good Willie Hunting, GopherGolf 3.1 demo, Gridz 1.2 demo, Haiku 0.2, idin 2.0, iMacGeddon, ISO Animals, Jared, MacFolklore 2.0.1, Mad Cow Roulette 1.0, Manhattan Apartment Hunter demo, McPoet 4.5, MindThump 1.0, Myth—Behind the Scenes, NetherWorld 1.2.1, Nuts And Bolts 0.9.5, PixelToy 1.0, Realmz 5.1.5, Rock Scissors Paper, Shallow Grave 1.0, Sim Cinema Deluxe 2.1, Sim Tape Dispenser, simMir 1.0, SimStapler, Smashing Windows II 1.0, Solitaire Till Dawn 3.3, Tarot Reader 1.0b1, Tempus Irae 1.11, Tomato Head, Win 95 Tester

Interface
CalcStrip 1.0.3, Designer's Studio 1.5, Desktopper 1.2, Kaleidoscope 2.0.1, PandoCalendar 3.2.2, PandoMural 1.0, PandoStickers 2.0, Window Monkey 1.2.4

The Kitchen Sink
Kant Generator Pro 1.3.1, Max Rates the World

Multimedia
Adobe After Effects 3.1 demo, Adobe Premiere 5.0 demo, Elastic Reality 3.1 demo, MovieUtilities CMM 1.4, Ultimatte 2.0 demo

Productivity
Concordance 2.1.1, MacTravesty 1.1.1, Mariner Write Lite 1.0.3, TimeSlice 1.7.2 demo, WASTE 1.3

Reference
Lotto Tracker II 1.5, LottoCalc 1.0

Sponsor demos
AbbottChat 2.0 demo, Action Files 1.0 Trial, Classroom Publisher demo, Creation Station Tutorial, FWB Software Offer, Myth II Teaser, QuicKeys 3.5.2 Trial, RealPool 1.0 demo, The Village Post, TotalAccess 2.0 Trial

Updates
BBEdit 4.5.3, ClarisWorks 5.0v2, GraphicConverter 3.3.1, Installer VISE 5.5, Newton Press 1.1

Utilities
ACE 1.3, DiskTracker 1.1.3, Drive Icon Reposition 1.2.3, GURU 2.7, Hyper-Stack Player Pro 2.4, Installer VISE 5.5 demo, My Tapeworm Is, PopChar Pro 1.1.1 demo, ShutdownESC 1.2.0, Volume Adjusters

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the web

highlights

Seybold and the Beautiful

The expo portion of Seybold San Francisco, Publishing '98 kicks off on Tuesday, September 1, with a keynote speech from His Interimness Steve Jobs. We'll bring you the latest proclamations from Apple's supreme leader with all deliberate haste.

iMac Mania

We've been biding our time waiting for the arrival of the new consumer Mac by posting a series of news items, product roundups, and reader reactions. See http://www.macaddict.com/mailbag for reasons why your fellow readers are or aren't buying iMacs, and check out http://www.macaddict.com/news to find out why an iMac is like a bulletproof gumdrop.

Market Forces in Action



As we go to press, Apple has made another round of multi-$100 price cuts on its desktop Power Mac G3 line. See http://www.macaddict.com/news for a before-and-after price comparison for each build-to-order option, from 300MHz processors to 128-bit graphics cards.

OUR AUGUST WEB SITE COLORS paid homage to the nascent iMac with a Netscape-safe simulacrum of Ice and Bondi Blue, plus translucent HTML.

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Liner notes on the *MacAddict* CD-ROM, late-breaking info, and disc replacement forms.

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http://www.macaddict.com
You know us, right? Well, this is our funky Web site, updated daily with fresh fun and games. Come out and play!

http://www.evangelist.macaddict.com
EvangeList is the official home of Guy Kawasaki's mailing list, bastion of Mac advocacy and scourge of the infidel.

http://www.maccentral.com
Every day, MacCentral stuffs you to the gills with hot news, product announcements, and nifty special reports.

http://www.macsurfer.com
MacSurfer's Headline News constantly scours the Web for all the news that's fit to link on Apple and the Mac universe.

http://www.versiontracker.com
VersionTracker's up-to-the-minute listings keep tabs on every Mac software product that's new, improved, or in bleeding-edge beta form.

http://www.macfixit.com
MacFixIt brings you all the latest news on bugs, conflicts, and other Mac troubleshooting issues.

http://www.macresource.com
Mac Resource Page provides timely news and reviews, special deals, bug reports, how-to primers, and the famed MRP RAMWatch pricing guide.

http://deal-mac.com
Deal-mac finds hot offers on cool products, helping Mac shoppers stay informed and save money.

http://ogrady.com
O'Grady's PowerPage is the ultimate resource for PowerBook users, with notebook news and mobility message boards.

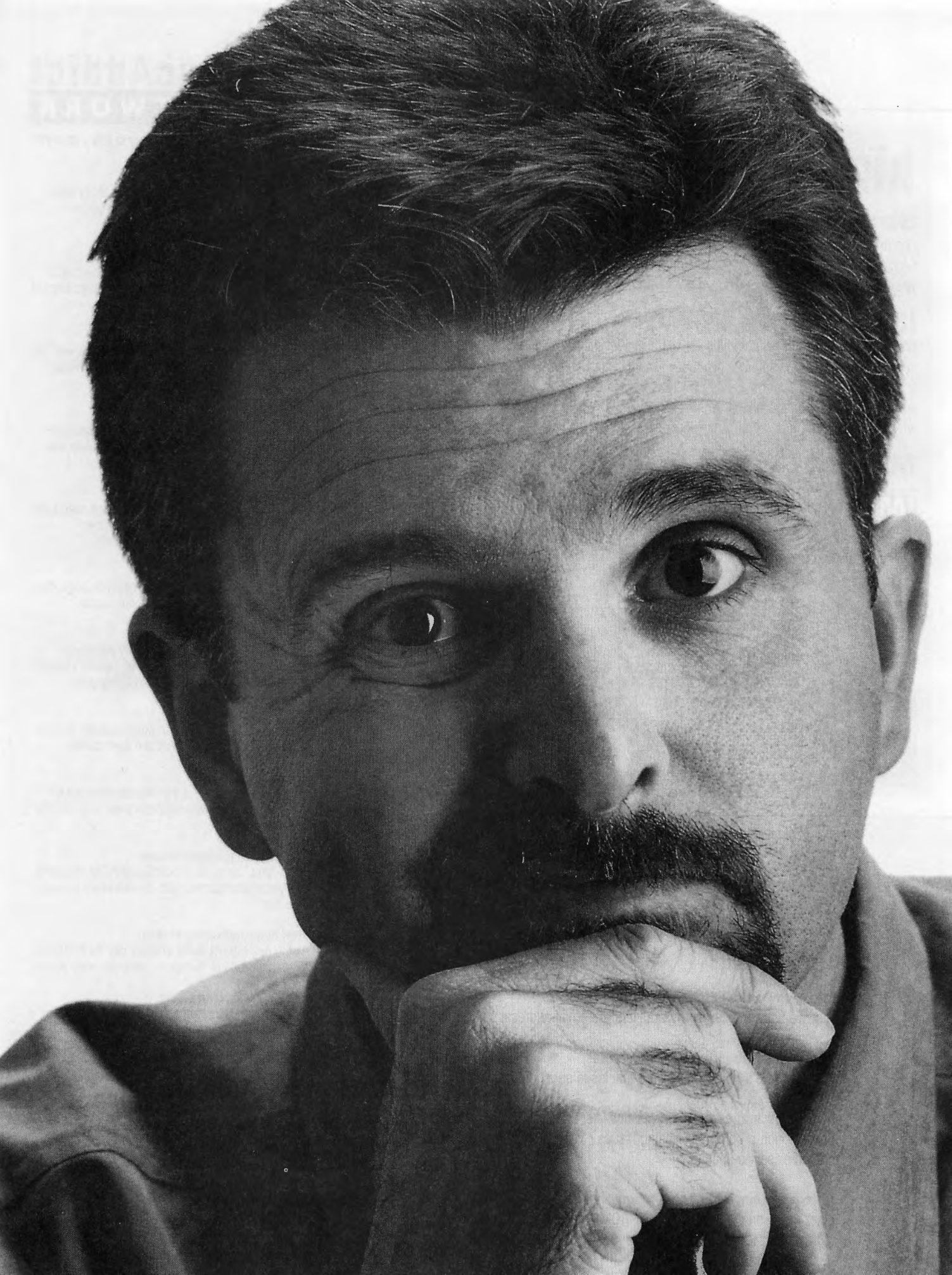
http://www.imgmagazine.com
Inside Mac Games is a monthly CD-ROM magazine devoted to Mac games, with its own news-packed Web site.

http://www.infoxczar.com/atat
As the Apple Turns tunes in every day for the latest twists and turns of the Apple Computer soap opera.

http://www.everymac.com
EveryMac's exhaustive catalog of Macs and Mac-compatibles provides complete specs and technical data (even on the semi-legendary Outbound notebooks).

http://www.iconfactory.com
The Iconfactory turns your drab desktop into a pixelated paradise with its fabulous selection of hand-crafted icons.

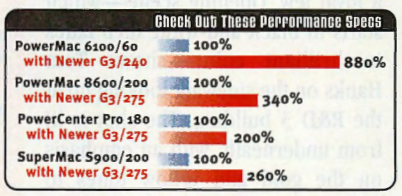
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editor's note

Love Steve or leave him, we wouldn't want to be him.

It's the favorite sport of those who write about Apple. After our morning Wheaties and stretches (and a nice big cuppa joe), we make the long climb to the top of our collective soapboxes and start in with our rants.

Here's what Apple's next move should be. Here's the latest big mistake Apple made. Here's what Jobs should do with Apple. Although Apple would be long dead and buried if it followed all of the advice it gets (mainly because most of this advice is either conflicting or just plain bad), it's also a lot of fun to play armchair CEO. I've certainly done it, as has every Mac journalist I know. It's like daydreaming about winning the lottery, only replacing the money with Macs. Although it has been done over and over, I am proud to present an illuminating (and potentially time-killing) twist to the time-honored practice.



What if... my dad ran Apple?

Under R.D. Reynolds, Apple would be a different place. Imagine Mac hardware so tight and well integrated that hardware failure would be nearly impossible. Of course, the trade-off would be a complete change in industrial design policy—function would almost entirely replace form. Need to ship DVD-ROM upgrades on current Macs? Just weld them to the sides of existing cases. FireWire? No problem—bolt on a card. Sabbaticals would be replaced with fishing trips to Alaska and certain lakes in central Canada—fly in, hike out. Now *that* would build teamwork. Marketing would be replaced with a "buy it—it's good for you" slogan and a hearty handshake. Tech support would consist of some notes on notebook paper detailing the measurements of each and every part in a Mac. Fix it yourself—it would be part of the Apple experience. Besides, *everyone* should know the Mac inside and out.

Although Apple would be long dead and buried if it followed all of the advice it gets (mainly because most of this advice is either conflicting or just plain bad), it's also a lot of fun to play armchair CEO.

What if... Steven Spielberg ran Apple?

So here's the situation—an embattled, beleagured computer manufacturer in California, forgotten by all except a loyal few. Opening scene—which starts in black-and-white then fades to brilliant color—shows Tom Hanks on the sidewalk looking up at the R&D 3 building. The shot is lit from underneath, with an emphasis on the gold and yellow tones to build a sense of hope. Hanks moves in and starts his day as interim CEO. Spielberg holes up in a basement office and writes scripts for the company's new ad campaign on a PowerBook 3400, while Hanks handles the day-to-day operations at Apple. While everyone in the company likes Hanks, they can't help but notice that he has no experience running a Fortune 500 company, and he doesn't quite seem to get the nuances of the technology. Not that anyone blames him. They're just feeling too darned good.

What if... Kenneth Starr ran Apple?

Bill Gates wouldn't stand a chance in his dealings with the Department of Justice—after all, his name is Bill. After handing out a few well-placed subpoenas and testing Windows code for traces of Mac DNA, that little legal battle would be over—or at least tied up in court for a lot of years, making headlines all the while. Since no one would really care, market share numbers would stay largely where they are. After awhile, Starr would leapfrog from CEO to CEO via any number of anonymous engineers, marketing professionals, and leads provided by journalists, until he threatened to sue Willard Scott because he once mentioned Seattle during his morning weather segment. Ultimately, the entire computer industry would be at risk of dying because people would go on to far more interesting pursuits, such as jigsaw puzzles and manila file folders.

What if... David Reynolds ran Apple?

He'd have the sense to call Steve Jobs and then get the hell out of the way.—*David Reynolds*

Our CD-ROM Revolution

After many months of wrangling ideas, code, and interface elements, this month we are proud to introduce a new interface for our monthly CD-ROM. Kris Fong and Adam Vanderhoof (in conjunction with Imagine new media developer Dan Catts) have been working hard to make an easy-to-navigate tour of the goodies on The Disc.

The new interface is pretty darned cool. Navigating it is simplicity itself, but it still retains almost everything that the original interface had. It takes a lot less RAM to use, but it requires a bigger monitor. We think you'll be pleasantly surprised. Either way, we expect to hear from you about it.

The best thing about the new interface is that it was completed using a spiffy little development environment called Realbasic. This stuff kicks butt. Realbasic lets you build genuine Mac applications without having to resort to learning C/C++ and investing a ton of time learning the 8,000 or so Mac toolbox calls. Besides being a great development environment, Realbasic may soon allow folks to cross-compile their applications and get Windows-compatible apps in the process.

Oh, and I need to tell you—we goofed on the Infowave PowerPrint 98 review (see Jun/98, p49). A line that should have been removed before the review went to print was not, and as a result, we reported that PowerPrint was compatible with the Alps MD-1000. It is not. I apologize for the mistake.

HOW'S YOUR SEARCH FOR MAC ACCESSORIES GOING?



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Hey, we know the places you can buy Macs and Mac stuff aren't exactly popping up like Starbucks these days. But we've got you covered. With high performance accessories like our TurboMouse® and Orbit™ trackballs, easy-to-use Mouse-in-a-Box®, and 2- and 4-button mice. And now there's our hot new Keyboard-in-a-Box™. You see, we've been making Apple products since 1981. And we're going to keep right on making them, until the Feds shut down Microsoft and Apple regains its rightful place as the king, the sovereign monarch, the mighty potentate of the cyberuniverse. Until then, check out the Maccessories® at www.kensington.com.

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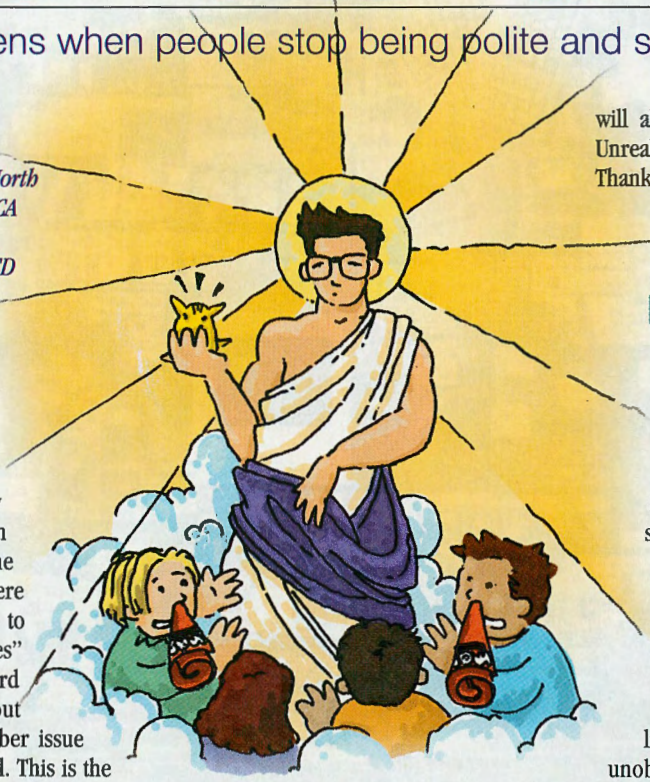
letters

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GET ON, GET ACTIVE. Talk to us and to other Mac addicts at the Web site.



Praise Be to Mark

Normally, it would be fair to say that I devour each issue as soon as it arrives. But when the September '98 issue arrived, there was a difference. When I got to Mark's "MacAddict Bluffs Notes" (Sept/98, p39), I laughed so hard I snorted the thing right out through my nose! The September issue obviously needs a warning label. This is the best literary parody I think I've ever seen. I bow and worship at the feet of the online editor.—Ronald Guest

I just wanted to let you know the only thing that tears me away from studying for my Ph.D. exams is your magazine. Having just read the latest issue, I'm forced to comment. In "MacAddict Bluffs Notes," you write: "The removal of the fabled Icon Garden, chronicled in the August 1998 issue, marks the end of the second cycle of *MacAddict* and may foreshadow either Ragnarok or renewal." Fear not, for Ragnarok is renewal. A quick rereading of the last 10 stanzas of the Eddic "Voluspa" that detail the renewal after the cataclysm will chase away any fears you may have. Well, there is that last stanza about the dragon Nidhogg flying overhead carrying corpses, but what that means depends on how you read the poem.—John Walter

Chicken Butt Out

While reading the July '98 issue, I stumbled upon a huge error! On page 4 near the bottom right, in that little box thing, it says, "What's up, *Chicken butt?*" Everybody knows—from the intrepid voyages of Captain Zumba-Lakun into the heart of northern Micronesia, where he braved overwhelming odds to discover the true chicken butt—that the correct phrase is "Guess what? Chicken butt!" The confusion may have come from the fact that the good captain came from Ohio, and when he came back, his wife asked him, "What's up?" to which he responded only, "Chicken butt" before collapsing from exhaustion. —Phil Hagelberg

We're Here for You

This is just a friendly little note to let you know that there are going to be some changes in my house. I'm getting my very own iMac. Yes, it's true. And I know what you're saying. "Wow, MacDaddy, that's great! But an iMac is a far cry from your Performa 550…Are you sure you'll be able to adjust?" And to this I must reply. Yes, there will be a period of transition, as there is with every change. But I will overcome. And if you ever need a break from *MacAddict,* a chance to forget the pressure of real life, an opportunity to get away from it all, remember that I will always be available for a game of Unreal. And now I have said my piece. Thank you for your time.

—Adam Backstrom

If You Can't Be Handsome, Be Handy

When I went from my PowerBook 3400/200 to a PowerBook G3/250, one thing I missed was the pop-down rear feet. So I went to the hardware store to the section that sells furniture coasters and bumpers. I found some hard-rubber, crystal-clear bumpers that were self-adhesive and placed one next to each back foot of my PowerBook. While they do not fold away like the 3400's feet, they are quite unobtrusive and put the keyboard at a better typing angle. They also improve air circulation under the 'Book and make lifting it off a hard surface much easier (you

You Know You're a MacAddict When...

…you build your house without windows or gates.—Michael Gough

…you say "eep!" instead of "oops." —Andy Sybalski

…your baby starts crying and you look for the Sleep button.
…you use AppleScript to automate flushing your toilet.
…you try to use Norton AntiVirus to scan your sick dog.
…you mess up in life and then run to a keyboard pressing Command-Z over and over and over and…—Jason White

…you subconsciously insert an *i* before any abbreviation of the word *Macintosh.*—Alvaro Heiden

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can get your fingers firmly under the machine before lifting). While I would prefer the built-in ones, this was an inexpensive substitute and the clear rubber goes nicely with the crystal Apple logo.—E. John Swift

Only If You Subscribe Again

Wow! I was just preparing to send in my bill for my new subscription, and man, do you guys have the greatest envelope-flap glue I've ever tasted! Could you please send more with my next issue?
—Phil Comparet

Looked Like a Booger to Us

I'd just like to say that I second Fawzi Dormeyer's motion to put more goo in with the poster. That stuff kicks @$$!—Chris Ruppel

Don't Feed Her Chocolate

I took a break from playing Harry and decided to decorate my very fat black lab, Annie, using only the best 30-year-old white eyeshadow and the most expensive of my mother's blush, and now Annie looks like an overweight Tammy Faye. Now I have nothing to do, 'cause the makeup won't show up on my other two labs (they're brown), so I am writing to you to say I have never missed an issue, nor will I.—Kelly Moore

What About Soylent Yellow?

I was finishing up my first reading of the August '98 issue and was reading Shutdown. I came across the "What he said/What he really meant" part, and I would have peed in my pants had I not already been in the bathroom. The part about Windows being made of people was a great tribute to Phil Hartman and was extremely hysterical. "Soylent Windows! It's made of people! People!" Ha—that's comedy.—Trey Colbert

Get Over It

OK. Right at the beginning of last month's letters section, there was a letter from a certain Daniel Hamilton referring to the @#$%^%! dots on the spine of the 'zine! I'm the dot addict; it's my topic! I'm the dot addict. I'm so crazed I made a Web site about it! I'm serious! Go to http://pluto.njcc.com/~bananaj/dots/theredots.html—dot addiction lives! We will triumph!—Alex Saretzky

He'll Give You the Finger

How many fingers does Max have? I mean, you can't even make up your mind about whether he should have four fingers or five fingers. Here is an example. Look in August '98, page 44—see the Freakin' Awsome? Five fingers right?

Now go to page 45, frame one—four fingers! Did I miss something?—Cris Koehn

Yes, They Are

Wow. G3s are fast.—Han4son Jiang

We Ate It

I would like to inquire about the status of my free ham. I explicitly recall that part of the subscription agreement included delivery of a large, fully cooked, sticky, spiral-cut ham. I have not received it as of yet, and any information you can send me regarding my free ham would be greatly appreciated. After all, what good is *MacAddict* magazine without a juicy, mouthwatering ham?—Paul Carpenter

Phong, Tschuwaaonng Schmong!

Your August '98 issue incorrectly claims that Macs make a "phong" sound on startup. In fact, the sound Macs make on startup is more

correctly described onomatopoeically as "tschuwaaonng." I look forward to seeing a full retraction in the upcoming issue and for *MacAddict* staff to cease writing "phong" on the pages of your otherwise fine publication.
—Fernando Colina

We Don't Do Typoze

In reading "You're Welcome, Bran4don" in the letters section of the August '98 issue of *MacAddict,* I knew there must be a logical explanation for the ever-so-excellent staff at *MacAddict* to make the typo in the spelling of Chris. After I hired numerous highly paid technical private dicks for seconds of intense investigation, my team could only come to this conclusion: The lightning speed data-entry expert at *MacAddict* hit the 4 key just before striking the R key, resulting in the unique and unintentional spelling of "Ch4ris." If you will notice, the 4 key is directly above and slightly to the left of the R key on your keyboard, making this a highly understandable mistype in the profession of data entry. However, if you will also notice, there is no number key in the vicinity of either the N or the D keys, making the so-called defacing of Brandon's name as "Bran4don" highly unlikely. In conclusion, the original misspelling of Brandon's name by *MacAddict* as "Brando" is much more likely to occur than the suggested "Bran4don." Besides, who finds it so humiliating to have a cool number stuck somewhere in your name? I'd much rather have that than have the last letter of my name left off altogether. Rich4rd is much cooler than Richar, and Brand9on is cooler than Brando any day of the week.—Richa4rd Ki4rk

Ha Ha Ha!

I would like to make it public that I, too, am suing Microsoft on the grounds that I couldn't sleep after the midnight release of Windows 98. All I could hear all night was the sound of Windows crashing!
—Jeff Steifer

Plotting Your Personal Demise

Hey, you guys! You know what? I was just kicking the crap out of Bill Gates on Celebrity Slugfest when I thought of something. Do you think Steve visits that site and takes out nerd boy for warping part of the Mac OS into Winblows? I mean, what else could the guy be doing with all of that Internet equipment and 20-inch monitors out there on the Apple Campus in good ol' Cupertino?—Jonathan Claydon

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get info

Keeping all the news that's printed fit, and all the fit news printed.

Third Time's the Charm

Apple's $100 Million Mark

Is the day drawing near when the novelty of Apple turning another quarterly profit wears off? We certainly hope so. In the meantime, it's thrilling to check in every three months and find out that yup, Apple Computer is still a profit-making entity. At the close of its third fiscal quarter of 1998, which ended June 26, Apple reported a third consecutive profitable quarter, netting a cool $101 million, a three-year high-water mark. Thanks to ongoing positive cash flow, Apple's reserves are at an all-time high of $1.99 billion, which should come in handy for the iMac marketing blitz.

Eyeballing the third-quarter numbers, we find that Apple's business remained stable, with G3-fueled profit margins compensating for lower average selling prices. The overall picture is nearly identical to that of the second quarter (see "Apple's Unit Sales Continue to Suck Less," Jul/98, p17), with sales of $1.402 billion, a gross margin of 25.7 percent, and operating expenses stripped to just under the $300 million mark. Apple would have turned in a healthy $75 million profit, were it not for a $33 million post-tax windfall from the IPO of Newton processor–maker ARM Holdings, as well as a $7 million expenditure for purchasing as-yet-unspecified technology from Macromedia. While Apple hasn't suffered as much from Asia's economic woes as other high-tech companies, its sales were down in Europe and Japan. U.S. sales typically make up half of Apple's income, but this quarter they accounted for 57 percent.

Now that Apple has mastered the art of living lean, it looks to the iMac to put it back on the growth track. Apple CFO Fred Anderson expects business to pick up in the fourth quarter, with serious growth kicking in during the first fiscal quarter of 1999. That's the winter of 1998 to you and me, so you can be sure the Cupertino crew will have visions of gumdrop consumer Macs dancing in their heads this Christmas.—*MS*

TOP SELLERS OF Q3 1998

Apple sold 644,000 Macs in its third fiscal quarter. That sure sounds like a lot of Macs, but which models are flying off the shelves the fastest? Here's how Apple's unit sales for the last quarter break down.



Entry-Level Power Macs 28%

Introduced at the beginning of April, the toothsome All-in-one was the surprise hit of the season, making up 21 percent of unit sales (about 140,000 units). Though the compact G3 is available only to education shoppers, it still accounted for one out of every five Mac sales; buoyed by the All-in-one's success, education unit sales were up 39 percent from the second quarter.

Other entry-level Power Macs. Once the backbone of Apple's product line, last quarter this category amounted to little more than a Power Mac 6500 liquidation, making up only 7 percent of unit sales (about 40,000 to 50,000 units). Otherwise, it's Power Mac G3s for everyone—at least until iMac numbers come in.

180,000 units



High-End Power Macs 52%

The one-size-fits-all Power Mac G3 continues to account for half of Apple's sales—an even 50 percent this quarter (about 320,000 units). From its November 1997 introduction to the end of the third fiscal quarter, the Power Mac G3 has sold about 780,000 units, averaging a steady 100,000 a month. Despite its relatively low pricing, the G3 line's fat margins have kept Apple comfortably in the black.

Other high-end Power Macs. This group amounts to a mere 2 percent of unit sales (about 10,000 units). Goodbye, full-size tower Macs; goodbye, six-slot cases. It's a G3 world now, and we just live in it.

330,000 units



PowerBooks 16%

Though it only debuted in May, and availability was underwhelming for the first few weeks, the new PowerBook G3 Series ultimately came through for Apple, accounting for 11 percent of unit sales (about 70,000 units). With manufacturing up to speed and large-screen models finally shipping, the PowerBook outlook should be bright from now on.

Other PowerBooks. Add the older mobile model unit sales to the tally—5 percent (about 30,000 units)—and PowerBook sales came to a healthy 100,000-plus—higher than the last couple of quarters for which we have unit sales figures.

100,000 units

Everything Else: With round-off effects, the percentages sum to a bit less than 100. Servers and other miscellany account for the remaining couple of tens of thousands of units.

Redmond Requiem

Money no match for bad news



Microsoft Deathwatch

The troubled Microsoft continues to flail in an unrelenting death spiral. Each new problem for the beleaguered company seems to hammer another nail in the Redmond, Washington–based software manufacturer's coffin. Taking cues from past media coverage of Apple, *MacAddict* continues the Microsoft Deathwatch, tracking the company's slip toward certain collapse. It may seem that we take glee in the embattled Microsoft's misfortune, but in fact we are very concerned for what this will mean for Apple. Should the floundering company collapse and withdraw from the operating system market, the lack of competition could make Apple complacent, and innovation would surely suffer. Indeed, the hobbled Microsoft's now almost inescapable condemnation is bad for everyone. Here is what we're concerned about this month.

RIP Delivering what could be described as a lethal blow to the company, a Utah judge ordered the recalcitrant Microsoft to hand over Windows 95 source code to operating system manufacturer Caldera. The latter will use the code to continue building its already almost insurmountable case against the besieged Microsoft, fingering Gates and friends for illegally tying MS-DOS and Windows together—thus blocking DOS alternatives such as Caldera's DR-DOS.

RIP Windows NT's myriad failures were highlighted yet again, this time by a near-catastrophic incident uncovered by *Government Computing News*. GCN reported that last fall NT systems running the Navy warship U.S.S. Yorktown brought the vessel to its knees when someone typed a zero into a data field. Unable to divide by zero, the ship came to a dead stop and had to be towed to port. The incident was just the most recent of many troubles plaguing Windows NT, which many in the industry now feel is dead in the water.

RIP Microsoft's senescent vendor support continues to deteriorate, as even former Microsoft executive and current business partner Rob Glaser, CEO of RealNetworks (makers of RealAudio), attested to the company's evil ways. The Machiavellian Microsoft's $25 million investment in RealNetworks apparently couldn't keep Glaser from blabbing to Congress about how the two-faced company cheated RealNetworks. Glaser told a congressional panel that installing Microsoft's media player—which still competes with RealAudio, despite the fact that Microsoft owns 10 percent of RealNetworks—disables the newest RealAudio player. The friendless Microsoft, eager to retain its remaining vendor support, quickly issued a workaround to remedy the problem, but few insiders think the attempted kiss-up will change the sleazy impression left on the computing industry.

RIP Highlighting the luckless Microsoft's hopeless scramble to find some industry to call its own, the *Wall Street Journal* uncovered repeated instances in which the frantic software manufacturer begged Apple to stop competing in the multimedia software market. Apple subsequently confirmed that the Department of Justice is now looking into an incident in which Microsoft pleaded with Apple not to release QuickTime for Windows in exchange for Microsoft promoting other Apple technologies. While Apple in the past has taken pity on the crippled company—highlighting several of its software solutions at key Macintosh conventions and offering it access to Apple patents for a pittance—the DOJ will most likely force Apple to cooperate.

RIP In a move widely seen as a sign that Bill Gates is distancing himself from Microsoft's day-to-day woes, the CEO promoted Steven Ballmer to president. Safely padded from the firestorm surrounding Microsoft, Gates had time to appear in a promotional video with Ballmer; the video, based on a popular Volkswagen commercial, signified Ballmer's new role. Industry onlookers, however, were quick to point out that the video underscored the ideologically bankrupt Microsoft's lack of creativity. See the video via CNN at http://cnnfn.com/hotstories/companies/9807/22/microsoft_pkg/gates3.mov.—*RC*

LPR TCP/IP Printing

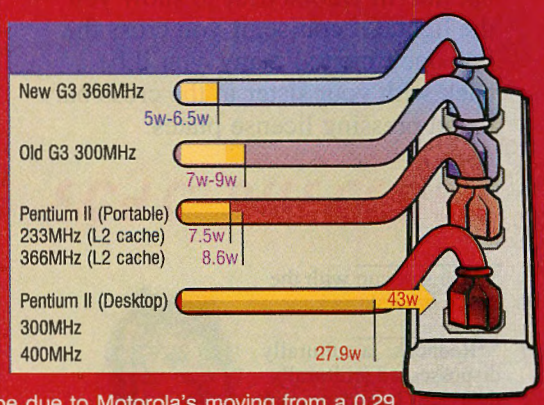
Did you know you can print using a TCP/IP connection? Apple's Technical Information Library article 24409 documents it. Line Printer Remote printing lets you print to a Line Printer Daemon–capable printer over the Internet. You need LaserWriter 8.5.1, Desktop Printing, and Mac OS 7.6, 7.6.1, or 8.1 (Mac OS 8 won't work). Here's how to set it up:

- Assign an IP address to your laser printer. Consult your printer's documentation for specifics.
- Open the Desktop Printer Utility and select Printer (LPR). Click OK.
- Select the proper PPD using the Change button in the upper half of the resulting dialog box. Using the Change button in the Internet Printer portion of the dialog box, enter the printer's IP address and queue name. Click Verify, then OK.
- From File, save the desktop printer and quit the utility.

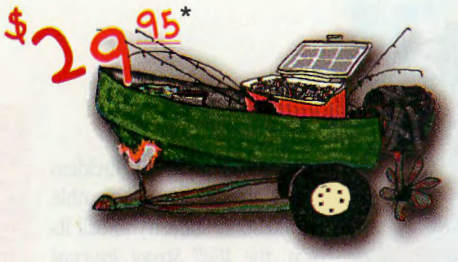
LPR printing works somewhat like sending a file, except that you're sending a print job.—*DR*

G3s Suck Less...

...power, that is.



A new round of G3s emerged from Motorola's alchemy labs in July, running faster and sucking up less electricity than ever before. Running at speeds of 300MHz, 333MHz, and 366MHz, these new chips consume less power (see chart), because they run at a lower voltage—1.9V, down from 2.6V. This reduced power and increased performance may be due to Motorola's moving from a 0.29 micron to a 0.25 micron manufacturing process. Smaller is faster—and cooler. IBM also announced a new way of making faster PowerPC chips using an insulation layer between transistors, allowing the company to make existing PowerPC chip designs that run 35 percent faster and use a third less power. This process is expected to appear in the second half of 1999.—*DR*



REDNECK** PUBLISHER

I've learned to deal with those stuck-up waiters in high falootin' restaurants. I've even gotten to where I don't make slurping sounds when I suck the soup out of my bowl. Experience has also taught me not to chew tobacco at big city social gatherings because they usually don't have any (good) place to spit.



Now I am ready to share my wealth of knowledge with others. (Please read this ad to a redneck friend.)

Armed with this great product, your favorite redneck will be able to whup out quick stationery based documents for Dear Jane letters, game warden applications, requests for parole, and more. There's calendars (for keeping track of hunting season), and lots of original redneck clipart. If you screw up, Sheriff Bubba tries to show you the light. Of course, if you cross the line one time too many, you'll be back with your sister in the cross bar motel pressing license plates.

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* Free spit cup with the first 4 orders!

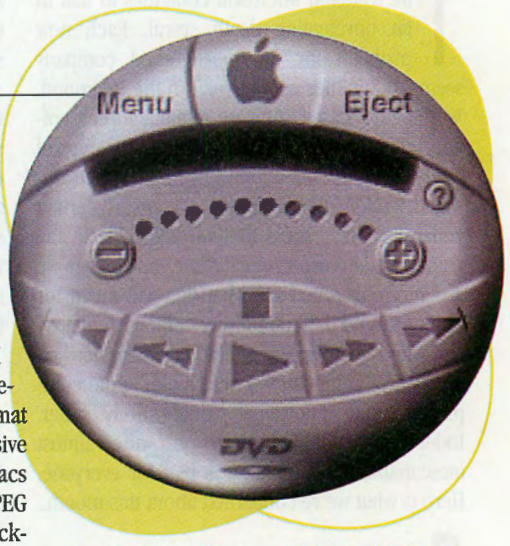
**Redneck: a culturally dispossessed (culturally deprived) human animal (person) of non-color (Caucasian) that is an alternatively schooled, (illiterate) knowledge-base nonprocessor (stoopid).



get info

DVD Desktop

G3s get a DVD personality



Apple's DVD software controller continues with Apple's edgeless design theme. Rewind, fast forward, volume, and other standard controls are quickly accessible, while more-advanced controls such as audio track switching, camera changing, and slow motion lie under a virtual panel at the bottom of the orb.

As commercial DVD movies muscle laser discs off the shelves and DVD-ROM drives supplant CD-ROM drives in the PC market, the time is right for the multimedia-savvy Mac maven to hop on both bandwagons. A DVD-ROM drive alone, however, won't give you movie-watching capability. The DVD-Video format used for movies involves resource-intensive MPEG-2 compression, and modern Macs require a little help from a hardware MPEG decoder in order to bring the latest blockbusters to your desktop.

The DVD-Video kit for the PowerBook G3—a combination of a DVD-ROM drive, a PC Card decoder, and a slick QuickTime-based software controller—was introduced at last July's Macworld Expo in New York, and began shipping shortly thereafter. Apple will implement its DVD-Video support for the desktop Power Mac G3 this fall as a build-to-order "personality" card option. According to Apple, when you order a desktop Power Mac you'll be able to choose from the plain old audio I/O card, the fancier audio-video card, or an all-inclusive audio, video, and DVD-Video decoder card to accompany your DVD-ROM drive. Apple said pricing for the desktop DVD-Video solution will be similar to the cost for the PowerBook DVD, which currently adds $400 to the price of a build-to-order PowerBook G3.

While DVD-Video capability won't sacrifice a precious PCI slot, Apple's system does rule out retrofitting an existing Power Mac G3 (even those which already have a DVD-ROM drive) with DVD-Video support. Fortunately for those folks and anyone who owns a Power Mac, there *is* a third-party solution. Elecede Technologies, which in May shipped a DVD-ROM and DVD-Video upgrade kit for the Power Mac G3, now has a SCSI version for other desktop Power Macs. The CoolDVD package includes a DVD-ROM drive (backward-compatible with CD-ROMs) and an accompanying PCI card that supports MPEG-2 video and Dolby Digital surround sound. The estimated price is $479.—MS

Microsoft Office Fix

Downloadable patch fixes unwanted data bug



Last month, we reported that a bug in Microsoft Office inadvertently includes random hard drive data in Office files (see "Are Your Documents Leaking," Sep/98, p15). Microsoft has released a patch that fixes the bug. The patch, which weighs in at a respectable 3.3MB (making for a bit of a download), alters the Microsoft First Run application to modify the OLE shared library files in the Extensions folder. Microsoft says the patch will fix the random data problem. Users can clean old files by opening them and resaving via the Save As command. To get the patch, go to http://www.microsoft.com/macoffice/productinfo/98dl/offi98patch.htm and start that modem downloading.—*DR*

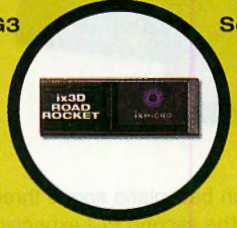
What cool PowerBook G3s become with an extended desktop.



Introducing Road Rocket

Macworld BEST of SHOW 1998 NEW YORK EXPO

With an **iXMICRO Road Rocket** graphics accelerator, your nifty, new Mac PowerBook® G3 Series laptop will give you even more freedom to roam. Not just the highways, airports and coffee shops of this great land – the furthest reaches of your desktop back home, too. Because **Road Rocket** has first-time-ever Mac PowerBook G3 Series support for a second monitor extended desktop. More room to work, more room to play. **Road Rocket** also comes with $200 worth of software, which is pretty cool in itself.



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cravings

Here, you never need to apologize for your Freudian slips.

EarSaver

Synthetic Productions



EarSaver is a background music program that provides virtual "Ambionic" soundscapes and music. Call it an audio screen saver if you will, but use it while you perform everyday computing tasks. EarSaver's unique software audio synthesizer works invisibly in the background without affecting other programs or tying up your CD-ROM or hard drive. EarSaver uses less than 2MB of RAM to play a half hour of stereo CD-quality music and comes complete with two albums, nine tracks, and over four hours of Ambionic soundscapes, which are a tapestry of natural sounds, synthesized timbres, and ambient musical textures. EarSaver works on all Power Macs, Mac compatibles, PowerBooks, and 68040-based Macs. EarSaver is available for online purchase via download or snail mail delivery. A CD-ROM is also available for purchase direct from Synthetic Productions for $29.95, which includes shipping in the United States. Call 201-568-8282 or visit http://www.earsaver.com to hear ambient tunes very soon.—*JH*

IT'S BETTER THAN MUZAK FOR YOUR MAC.

PowerBook PCI Expansion for the PowerBook G3 Series

Magma

That new PowerBook G3 can do everything a desktop or tower does, especially with free expansion slots. The portable PowerBook PCI expansion system comes in two different configurations for your expansion needs. The basic chassis gives you three PCI slots and includes a 120w power supply, convenient power connectors, and mounting brackets for a maximum configuration of two peripheral devices, one 3.5-by-1-inch internal and one 3.5-by-1.6-inch internal. Its expansion backplane sports three PCI slots: Two slots support full- or short-length PCI cards, and the third slot, smaller PCI cards. The second PCI expansion configuration is available with a 200w, 300w, or 400w power supply. Its expansion backplane sports seven PCI slots that support short-length or full-length PCI cards. Wow! You connect the PowerBook PCI expansion system to a G3-series PowerBook through an expansion bay module and a special expansion cable. Prices start at $1,050 and vary according to configurations. To find out about your options, visit http://www.magma.com or call 619-457-0750.—*JH*



YOU'VE ONLY SEEN MORE SLOTS IN LAS VEGAS.

FunStick and FunPad

Macsense Connectivity

If you thought game controllers were ugly black devices, look at these beige beauties. The FunStick and FunPad from Macsense Connectivity match your Mac's exterior and sport curvaceous bodies that make your joystick thrashing or gamepad pounding easy. FunStick and FunPad plug into your ADB port and come with the appropriate software drivers, which are a snap to install. FunStick features a large base with suction cups that hold the stick steady as you push and pull it—I've thrashed it already—four programmable keys on the stick, and four programmable action keys on the base. You can even use the joystick's pointer mode to emulate mouse movement on screen.

ALL PLAY AND NO WORK MAKES JACK A FUN BOY.

The FunPad is not only ergonomic like its FunStick homologue, but also features eight programmable buttons. MDK rocks with a FunPad! Plus, FunStick and FunPad offer a two-player switch, which allows you to invoke personal settings without interfering with another player's. Gamers need tools like the FunStick ($36.95) and FunPad ($24.95) to do their work because a keyboard just won't do. For more info, jump to http://www.masensetech.com or call Macsense at 408-745-0955.—*JH*





Photos by Aaron Lauer



Hystereo

Clixsounds

Raise your hand if you think the Mac's original system sounds are boring. *Quel ennui!* Should you desire more sounds, take a look at Hystereo, Clixsounds' CD collection of unique sound files for the Macintosh. It includes hundreds of cool files for use as startup sounds, shutdown sounds, alert sounds, email sounds, system clock sounds, phone greetings, system function sounds, and collectibles. Each sound is available in both high-fidelity 16-bit, 44kHz and 8-bit, 22kHz stereo versions. The collection contains a variety of styles, including Comical, Musical, Hi-Tech/SciFi, Vocal, Sound Effects, and more. My favorite system sound is the 16-bit Demon Growl. Put that on a 300MHz G3, and your friends will be in awe. The metaphor doesn't end there, though. Hystereo features rumbling engines, tire-screeching burnouts, chimes, symphonic bursts, breathy male and female voices, and androgynous alien mumblings. If you're not sure, download the demo and listen. You can order the $34.95 Hystereo CD directly from Clixsounds at http://www.clixsounds.com, or call 405-721-3283.—*JH*

ACTUALIZE YOUR MAC'S SONIC PROWESS.

TOOL BOX FEARS

BY DEVIL DAVID REYNOLDS

ILLUSTRATIONS BY DAVID POVILAITIS

Think of it. It's late—the last tattered remnants of sunlight are fading in the west. You're coming home from your special Halloween Mac users' group meeting, happily whistling the theme from the "Andy Griffith Show" (which has been stuck in your head ever since your great-uncle blasted it in the living room this afternoon), when you get this odd feeling at the base of your neck. You know—it's the kind of itching whine you feel when you're swimming in a lake and a motorboat goes by in the distance, its sharpened propeller blades chopping through the water. It's *that* kind of feeling.

Is someone watching from that clump of bushes ahead? Or did that stranger in the stinky sweater turn around to follow you? Pulling your commemorative 25,000,000 Macintoshes Sold pen out of your pocket—just in case—you cross the street and walk quickly toward home. Just when you think you're safe, from nowhere a towering shadow looms in front of you. The light is behind him; you can't see his face. But you can hear his rattling breath.

"Have you seen the iMac?" he rasps. "It's gonna kick PC butt. You gonna buy one? When? Wanna come over and see my G3?" You shriek, jump, and gesture wildly with your pen before realizing it's your best friend, dressed in one of the scariest costumes ever—the Rabid Evangelist. The horror—it's five times more frightening than Marlon Brando in a G-string slathered in butter posing on a carved stone in Southeast Asia.

Just think, with the tools on The Disc, you too can dress up in the guise of one of five different spooky Macophiles. You'll also get a chance to play with more than 30 of the hottest shareware utilities out there, plus some rockin' demos. Go ahead, there's nothing to be afraid of...

FIND ALL OF THE SHAREWARE, freeware, and demos mentioned in this article on The Disc.

The Starving Artist

By day, she strives for digital perfection, hunched over a mouse, equipped with nothing but an old copy of MacPaint. By night, she sleeps like everyone else. She is the Starving Artist, thirsting for truth and beauty, hungering for that half of a Big Mac she saw peeking out from behind a parked city bus on the way home from the canned-food outlet. She oozes raw talent (don't worry, it's not lethal), but she struggles to turn it into inspiration—and income. To help the Starving Artist, umm, not starve, we rounded up a collection of tools that might provide some inspiration—and help pay the bills.

Toolbox List

- Animation Maker 3.1 demo
- ColorBox
- Fractal Domains 1.2.3
- GraphicConverter 3.3.1
- The Mutatron 1.1
- Photoshop 5.0 demo
- PixelToy 1.0
- Eight Photoshop plug-ins
- RenderBoy 2.0.1
- TimeSlice 1.7.2 demo

Toolbox Treats

Animation Maker 3.1

Developer: Voget Selbach Entertainment
Price: $20 (demo)

Even starving artists have to eat. Animation Maker is a shareware application that lets you make animated GIFs (and other animation types) that you can then contract out to wealthy Web site owners so you don't have to starve too much.



ColorBox

Developer: Mind's Eye Media
Price: Free

ColorBox helps the "aesthetically challenged make informed decisions" about Web page colors. While it doesn't guarantee beautiful pages, it does generate tons of Web-safe color combinations.

Fractal Domains 1.2.3

Developer: Dennis C. De Mars
Price: $20 (shareware)

Fractal Domains creates order from chaos—a laudable goal for any artist who looks for inspiration from the mathematics governing nature. Plus, the colors look really neat. You can create a Julia set from a point on a given fractal design, zoom in to look at that item in exquisite detail, and then select a color palette for that fractal from the available list. Fractal Domains creates colorful designs that inject vitality into even the most lifeless day.

The Mutatron 1.1

Developer: Dale M. Greer
Price: Free

The Mutatron lets users distort, spike, and otherwise mutate rotating 3DMF objects (such as beanoids and bananoids) to provide some of the most unusual shapes ever to rotate in a virtual environment. Look out for that torus—it has spikes!

RenderBoy 2.0.1

Developer: Paul Rybarczyk, Vista Systems
Price: $25 (shareware)

RenderBoy is a ray-trace 3D modeler that lets you create photo-realistic 3D scenes (such as a still pool near the Acropolis after a summer shower). But the ability to create 3D scenes isn't RenderBoy's only feature. It also lets you create animations in which the objects and point of view move. While this isn't a high-end implementation of inverse kinematics, it does produce nifty animations.

TimeSlice 1.7.2

Developer: Maui Software
Price: $49 (demo)

To go from Starving Artist to Pleasantly Plump Artist, you'll need to bill someone for all that artwork you've been producing. TimeSlice is an ideal way to keep track of who owes you what. TimeSlice tracks the amount of time spent working on an individual document, expenses associated with that document, hourly rate, client, breaks, and total charges, making it easy to submit an invoice and get paid for your labor.

Trick Software

PixelToy 1.0

Developer: Leon McNeill
Price: Freeware

If you're looking for inspiration, PixelToy will bring forth the very fire of the universe—or at least let you "stare bovinely slack-jawed at the purty moving pictures for hours," as developer Leon McNeill says.

PixelToy's main menu shows the results of your setting in swirling, soothing colors—enough to quell those impulses that frighten even your therapist.

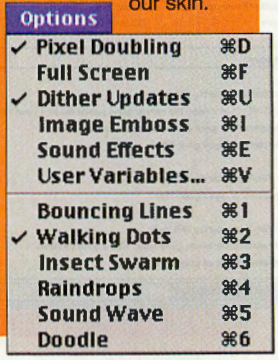


With the Colors menu, you can choose from seven preset color palettes (choose System for a fast set) or create your own palettes using the Random selection. Add that new color set to the menu using the Add This Set command.





When you have selected your color set and you've got your drawing methods down, apply an effect to the settings with the Effect menu. Although they all have a certain charm, Fester really gets under our skin.



Use the Options menu to control how PixelToy draws its colors. Choose Doodle to draw lines across the screen for added creativity.

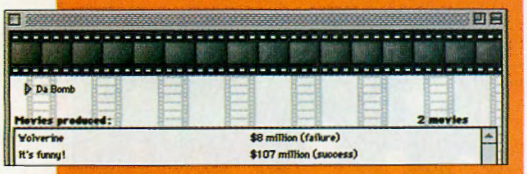
Trick Software

Sim Cinema Deluxe 2.1

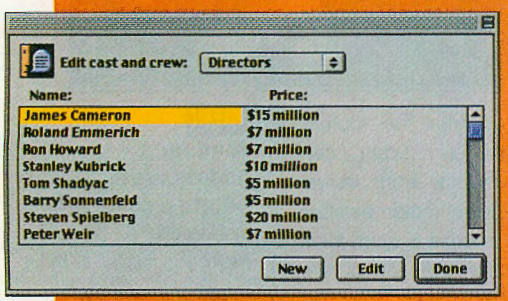
Developer: Shannon Schroeder
Price: $10 (shareware)

In Hollywood terms, $10 would barely buy you a puff of Leonardo DiCaprio's cigarette, but that's all you pay to enjoy Sim Cinema Deluxe. With it, you can pretend you've quit your day job and gone to work as a producer at a film company. The object is to make a lot of films that give you notoriety, respect, and most of all *money*.

Here's an inside look at Sim Cinema DX.

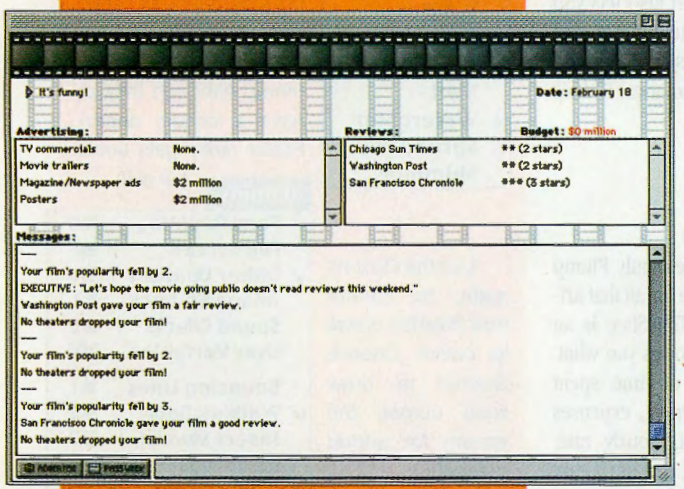


In the above screen, you follow the progress of your production company, examining the success or failure of past films, or you start rolling on new ones.



If the same old names get stale—Kevin Costner just needs to stop—you can edit them (and change their asking price) with the built-in editor.

After you've finished production, it's time to let the beast out onto the streets. Once you've released a film, all you can do is advertise or lay low, and hope no one is reading the reviews—that's what saved *Godzilla*.



The Tortured Temp

Savior or leper? Whatever the role, he's on the job making a stunning $8 an hour enduring the trials of working at yet another company on yet another meaningless monkey-boy task: Transcribe the VP of marketing's spin control speech; make a database of 2,112 business cards; find the bathroom key that fell into the sewer grate. Even the strongest mental defenses can crumble under these pressures, which is why we put together this portable collection of meaningless, yet fun, sanity savers to take along on the job.

Toolbox List

- Burning Monkey Solitaire
- Ebola Monkey Bingo 1.0.1
- Farkle 2.5.1
- iMacGeddon
- InCDius 1.1
- ISO Animals 1.0
- MacCDDB 0.8.6
- MacFolklore 2.0.1
- MindThump 1.0
- My Tapeworm Is... 1.0.3
- Rock Scissors Paper 1.0
- Sim Cinema Deluxe 2.1
- Sim Tape Dispenser 1.0
- SimMir 1.0
- SimStapler 1.0
- Tarot Reader 1.0b1

Toolbox Treats

Burning Monkey Solitaire

Developer: FreeVerse Software
Price: $14.95 (shareware)

The good folks at Freeverse Software (who brought us such time-wasters as SimStapler and Jared) have taken on the time-honored tradition of employee revenge through solitaire with their own version of the classic card game—Burning Monkey Solitaire. This implementation not only includes several hour-eating solitaire variations, it also features a theater full of simians. To avoid early termination, test out the Boss Coming menu selection before using it.

iMacGeddon

Developer: Rudi Muiznieks
Price: $5 (shareware)

It's a Director program and runs slowly on a 6500/200, but hey, it features the iMac (perhaps the first shareware game to do so), the ability to squish Bill Gates, and a pickup truck—what more could you ask for?

InCDius 1.1

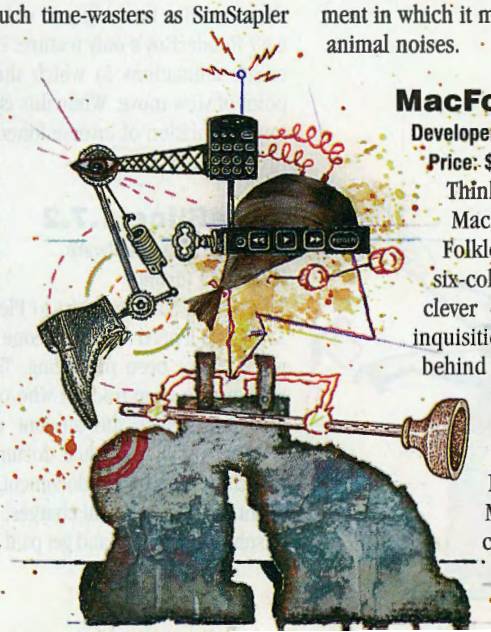
Developer: Glenn Howes, Generally Helpful Software
Price: Free

Try this for slacker irony—a practical use of Java that reduces work. Huh? InCDius is a Java program that looks at a currently mounted audio CD; asks an Internet CD database the title, author, and track names; and lets you save the results in your Apple CD Audio Player's preferences so you can avoid at least *one* dull data entry task.

ISO Animals 1.0

Developer: Argus IG
Price: $25 (shareware)

These four fine virtual animals couldn't be easier to use—they require no user input and continue operating until you quit the program. Each animal has its own environment in which it moves around, making cool animal noises.



MacFolklore 2.0.1

Developer: Scott Kleper
Price: $5 (shareware)

Think you're the keeper of all Macintosh trivia items? MacFolklore will push you to your six-color limits with its fiendishly clever questions. When will the inquisition stop? Never. The secret behind this program's amazing hold over those looking to waste time is Puffy Button Technology, or PBT. It's what differentiates MacFolklore from its competitors.

The Misunderstood Poet

Sometimes even putting on your favorite black turtleneck and going down to Denny's for a cup of roofer's-tar coffee doesn't lift the fog of existential angst that's gathered in the late-postmodern era. Sometimes all that's left to do is take up a pencil against a sea of troubles and sneer at those around you who just don't get it. Maybe this time it will be an epic poem that leaves Ginsberg choking on your dust. Or perhaps it will be a stream-of-consciousness slam that puts a real hurt on Joyce. Either way, it's going to rock the world a lot harder than your zucchini manifesto.

Toolbox List

- Concordance 2.1.1
- Haiku 0.2
- Kant Generator Pro 1.3.1
- MacTravesty 1.1.1
- McPoet 4.5
- Waste 1.3

Toolbox Treats

Concordance 2.1.1

Developer: Giovanni Giusti
Price: Free

One of the best ways to learn to write is to analyze the work of those you admire. Concordance takes you inside the mind of these authors by processing a text file and displaying its size, the total number of words in it, and the number of different words. Concordance also generates a word list with a loose page-numbering scheme so you can go back through the file and see where certain words appeared.



Haiku 0.2

Developer: Fuzzy Gerdes
Price: Free

That wacky Basho: Using the 14-syllable haiku poetry form to express Zen beliefs, he became a driving force behind the preeminent poetry form of Japanese origin. Oh, sure, the structure is simple, but actually capturing the essence of a great haiku can be exceedingly difficult. That is, it's tough unless you use the Haiku HyperCard stack, which generates a 14-syllable poem from a list of five- and seven-line phrases with the click of a button. You can even add your own phrases for a more personal touch.

McPoet 4.5

Developer: Chris Westbury
Price: Free

No relation to McDonald's here—please put your attorneys down and step away from the lawsuit. McPoet asks for a subject and gender, and writes a poem in one of several styles, including e.e. cummings, Dadaist, biblical, Shakespearean, and even Alt.sex—use this one with caution (although it makes no sense, it sounds dirty somehow). McPoet can also take other text and warp it into one of several forms, blurring text (with random replacements), deleting every other word, or randomly swapping vowels for fun.

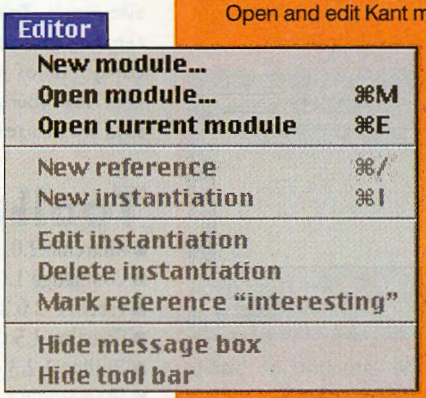
Trick Software

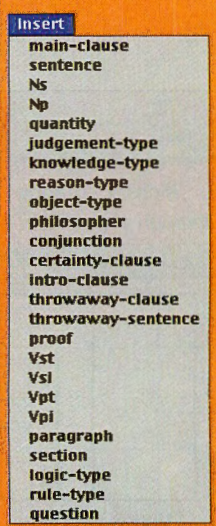
Kant Generator Pro 1.3.1

Developer: Mark Pilgrim
Price: $15 (shareware)

What writer couldn't do with more of that lighthearted philosopher, Immanuel Kant? Well, Kant may be dead, but thanks to Kant Generator Pro, his verbal stylings live on. Just run Kant Generator Pro, and obscure and obtuse ramblings inspired by the master fill your Mac. Here's a look at how Kant Generator Pro works.

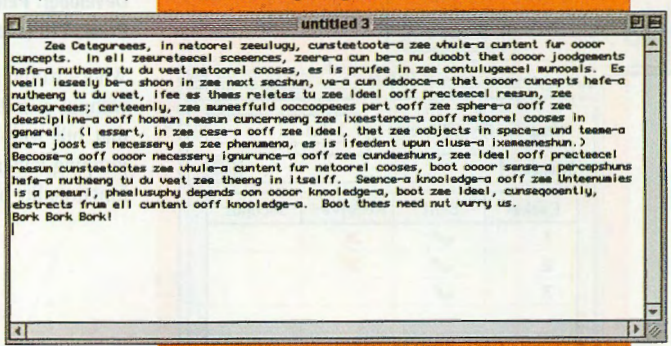
Open and edit Kant modules in the Editor—a vital feature if you're creating your own spin on Kant (and who isn't these days?).

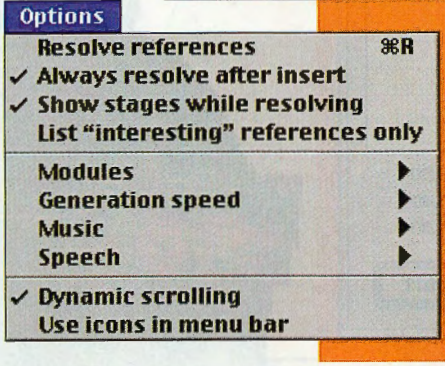




The Insert menu contains the main controls for generating Kant-like rants. Select any of the text objects listed, and Kant Generator Pro generates the appropriate text and inserts it into the main menu.

Below is a fine example of how Kant might have written if he were moonlighting as the Swedish Chef.





Under the Options menu, you can control which modules to use, whether to use music or speech, and how Kant Generator Pro handles references. Modules include Thank You (for thank-you notes); Excuses, Excuses (to help with those times when you just can't make it work); and Swedish Kant (which adds a Swedish Chef flavor to the Kant-onese produced).

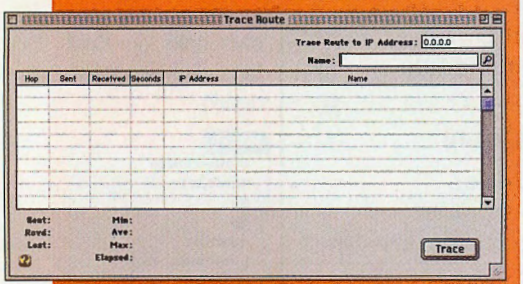
Trick Software

IPNetMonitor

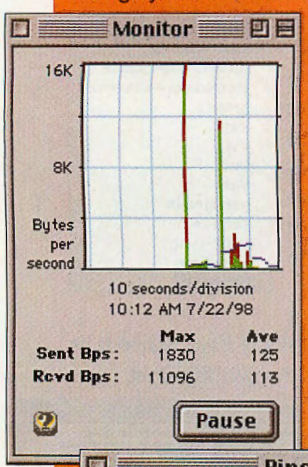
Developer: Sustainable Softworks
Price: $20 (demo)

For those who want a complete and uncensored set of TCP/IP networking utilities, IPNetMonitor is the answer. This utility provides all kinds of useful—and fun—network tools. Here's a look at a few.

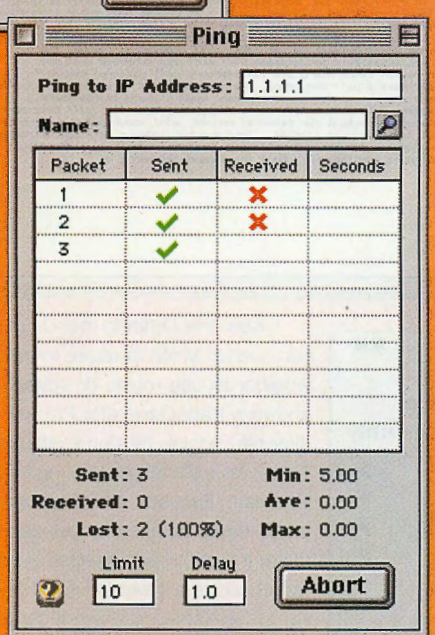
Use Trace Route to follow a lowly set of packets as they make their way from source to destination. See how many hops it takes to get from your Mac to http://www.apple.com.



Monitor graphs the amount of traffic through your TCP/IP connections.



Ever wanted to know if there was a pingable computer at the IP address 1.1.1.1? Well, there's not—at least not when we ran this test. This utility is fun for those who want to see if there is really someone else out there. Ping away.



The Cellar-Dwelling Wirehead

Let's face it—Vitamin D is overrated, and sunlight causes skin cancer. Besides, with a Mac and the proper Internet access, you don't even need to climb out of the basement to the outside world. Telecommuting, online banking, shopping for books, CDs, and even pizza—you can get all of this through the end of a data line. Now your only concern is to make that data link as useful—and fast—as possible.

Toolbox List

- Anarchie 2.0.1
- Combadge 1.0.1
- FreePPP 2.6.2
- GearBox 1.5 demo
- Hotline 1.2.3 demo
- IPNetMonitor 2.1c1
- IPNetRouter 1.2.1
- Mac Init Strings 2.1
- MacTCPWatcher 2.0
- Microsoft Internet Explorer 4.0.1
- Netscape Communicator 4.5
- NotifyMail 3.1
- OT Advanced Tuner 1.2.4
- OTSessionWatcher 1.0.1

Toolbox Treats

Anarchie 2.0.1

Developer: Peter N. Lewis, Stairways Shareware
Price: $10 (shareware)

Where would any self-respecting wirehead be without a first-class FTP client? Anarchie fills that bill with a Finder-like interface, a cool jumping-kangaroo cursor, and Archie search functionality built right in.



Combadge 1.0.1

Developer: Andrew Tomazos, Stairways Shareware
Price: $25 (shareware)

Think of it—use Combadge to connect to a friend who is also using Combadge, and you can send messages back and forth as if you had a two-way chat channel all your own. If your friend doesn't have Combadge, the software sends a standard email message instead.

GearBox 1.5

Developer: Rockstar Studios
Price: $25 (demo)

GearBox makes managing multiple Internet configurations a dream by handling configurations for Internet-related system software, Internet applications (such as Netscape Navigator, Internet Explorer, and Eudora), and Web bookmarks for multiple browsers.

Mac Init Strings 2.1

Developer: Mountain Ridge Dataworks
Price: Free

Modem initialization strings tell your modem how to behave, but they're almost impossible to understand. Mac Init Strings comes to the rescue with its database of modems and their init strings. Once you look up your modem string in Mac Init Strings, you can copy the string or test it out on your modem.

OT Advanced Tuner 1.2.4

Developer: Sustainable Softworks
Price: $25 (shareware)

This one is for the hard-core Net user. OT Advanced Tuner can adjust TCP window size, maximum segment size, time-out intervals, and lots of other parameters. Tweaking these helps you get the best performance out of your network—if you understand how TCP/IP works.

OTSessionWatcher 1.0.1

Developer: Peter N. Lewis, Stairways Shareware
Price: $35 (shareware)

Curious about what data gets transferred via a TCP/IP stream? Fire up OTSessionWatcher. This application reveals things you never knew about the information your Mac exchanges via your Internet connection. For example, running OTSessionWatcher shows an odd interaction between Internet Explorer 4.0 and a Microsoft server—even when you didn't initiate a connection to a Microsoft site. Hmmmmm...

The Rabid Evangelist

It doesn't matter what the question is—the answer is Macintosh. What's the best Internet client? Macintosh. What's the premier tool for graphic designers? Macintosh. What's the best fruit for a sky-high apple pie? Macintosh. Despite your best efforts, some stubborn PC-using masochists don't see the world through the same six-color glasses you do. That number seems to be shrinking (either you're converting the unwashed masses, or they're just getting better at avoiding you), but there's still work to be done.

Toolbox List

- IconFactory Originals
- Billmo Comedy 4.0.4
- Get-a-Mac
- Made with Macintosh graphics
- *Max Rates the World* movie
- Propaganda
- Smashing Windows II
- Two MacAddict Kaleidoscope Schemes
- Win95 Elvis sound
- Win95 Tester
- Windows 95 Crashes

Toolbox Treats

Billmo Comedy 4.0.4

Developer: MultiMediocrity Theater
Price: Free (applauseware)

Billmo is good for hours of guffaws—or at least a chuckle or two. After running through the intro movie, you get to clickle the oddly disturbing Billmo doll—and find out why it's a good thing Microsoft isn't in the toy business.

IconFactory Originals

Developer: Corey Marion, Gedeon Maheux, Talos Tsui, Dave Brasgalla; The IconFactory
Price: Free

Make a statement using your Mac's native icon ability by installing nearly 250 icons all over every Mac to which you have access. Icons include all of Apple's desktop and portable lines (including the iMac and the PowerBook G3 Series). Also included are the three World of Copland collections, with icons inspired by the never-released Copland OS.

MacAddict Kaleidoscope Schemes

Developer: Mark Simmons
Price: Free

Hear that sound? No, that's not Gabriel announcing the downing of some wall. It's just us, with a little self-indulgent horn blowing—is there any other kind? With MacAddict Kaleidoscope Schemes, you, too, can bring the world of *MacAddict* onto your desktop. Choose either the classic purple-and-green scheme (with two flavors) or the up-to-date (and short-lived) MacAddict98 scheme.

Made with Macintosh graphics

Developer: Various
Price: Free

You labor long and hard on your Web site using nothing but a Macintosh, and at last you produce a thing of digital beauty. Use this collection of Made with Macintosh graphics to tell the wired world what tools you used to bring forth this masterpiece. Just drop an icon on your Web page, and—boom—you've got an instant pro-Mac message. Encourage your fellow Webmasters to do the same!

Windows 95 Crashes

Developer: William Mathieson
Price: One Windows joke (jokeware)

It's just a joke—"Please wait while your Windows box crashes"—but it makes a mighty fine desktop pattern on the ol' Macintosh. The author of this pair of desktop patterns merely asks for a Windows or Microsoft joke in return for the file, and he'll even put you on his Windows Joke Mailing List (or not, if you think you get enough junk mail as it is).

Editor David Reynolds hears all of these voices on clear, still, late summer nights, and sometimes he gets really really upset because they just won't shut up. Aaaaah!

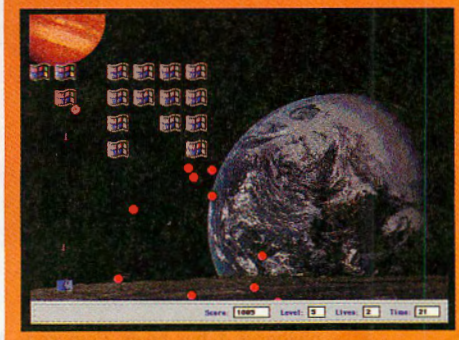


Trick Software

Smashing Windows II

Developer: Richard Bannister
Price: Free

Getting the urge to smash a few windows? Well, after you come back from your riotous spree at the glass factory, sit down and relax with a couple of games of Smashing Windows II. This Space Invaders look-alike substitutes well-known computer icons for both the aliens and the defenders of everything just and true. Here's a peek.



Although it looks hopeless, it's not. Just keep blasting away and you'll get through. Remember that you can shoot down the Windoid's ball bombs.



What do you want to shoot today? Pit the stalwart defender against the evil of your choice.

Finally—you get a chance to shoot it out at the OK Corral. Choose Stonehenge or outer-space backgrounds as the scene of the fight.



Movie Magic

by Raf Anzovin

We've created a QuickTime special effects epic called *Escape from MacAddict.* It stars Max, Dennis, and the *MacAddict* crew, and uses every effects technique we discuss here, from 3D animation and morphing to bluescreen compositing and particle animation. You'll also find demos of many of the products mentioned in this article on The Disc, should you be inspired to create your own epic adventures.

FIND THE QUICKTIME MOVIE ***Escape from MacAddict*** **and product demos on The Disc.**

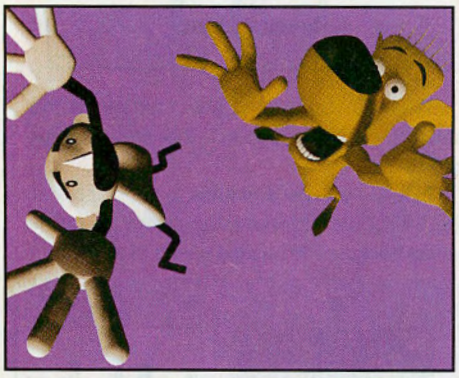
Spielberg? A has-been. Cameron? A piker. Your cinematic vision is much, much grander than theirs. Sure, anybody and her sister can make a QuickTime movie in the backyard with a camcorder and a Mac. But you want more—you want your actors to dangle from the Chrysler Building as they fend off waves of hungry bugblatter beasts from below and angry terrorists in helicopter gunships from above. And then there's that flaming comet that's about to obliterate the Bronx...

So what if they laugh. So what if they say it's impossible. So what if they say your miniscule movie budget wouldn't keep a Hollywood effects house supplied with Tums. Don't listen to them, because grandiose QuickTime visions are within your grasp. You can outfit your Mac with the latest movie magic gear—some of the same stuff used (secretly, because Silicon Graphics doesn't want you to know) at Industrial Light and Magic and other legendary effects companies—for less cash than you'd spend on, say, a 1989 Corolla with a big ding in the door and 98,000 miles on the odometer.

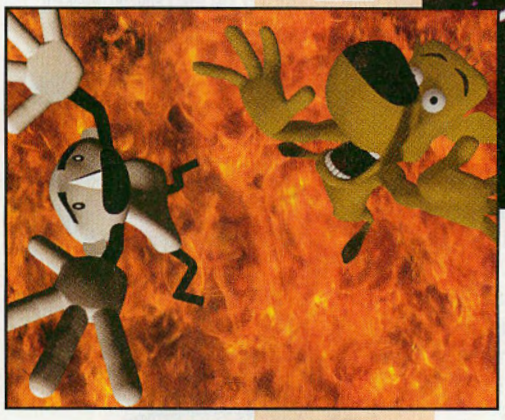
Of course, creating great movie special effects isn't exactly easy; people spend lifetimes studying and perfecting the craft. But read on if you want the inside secrets to the essential movie magic techniques.



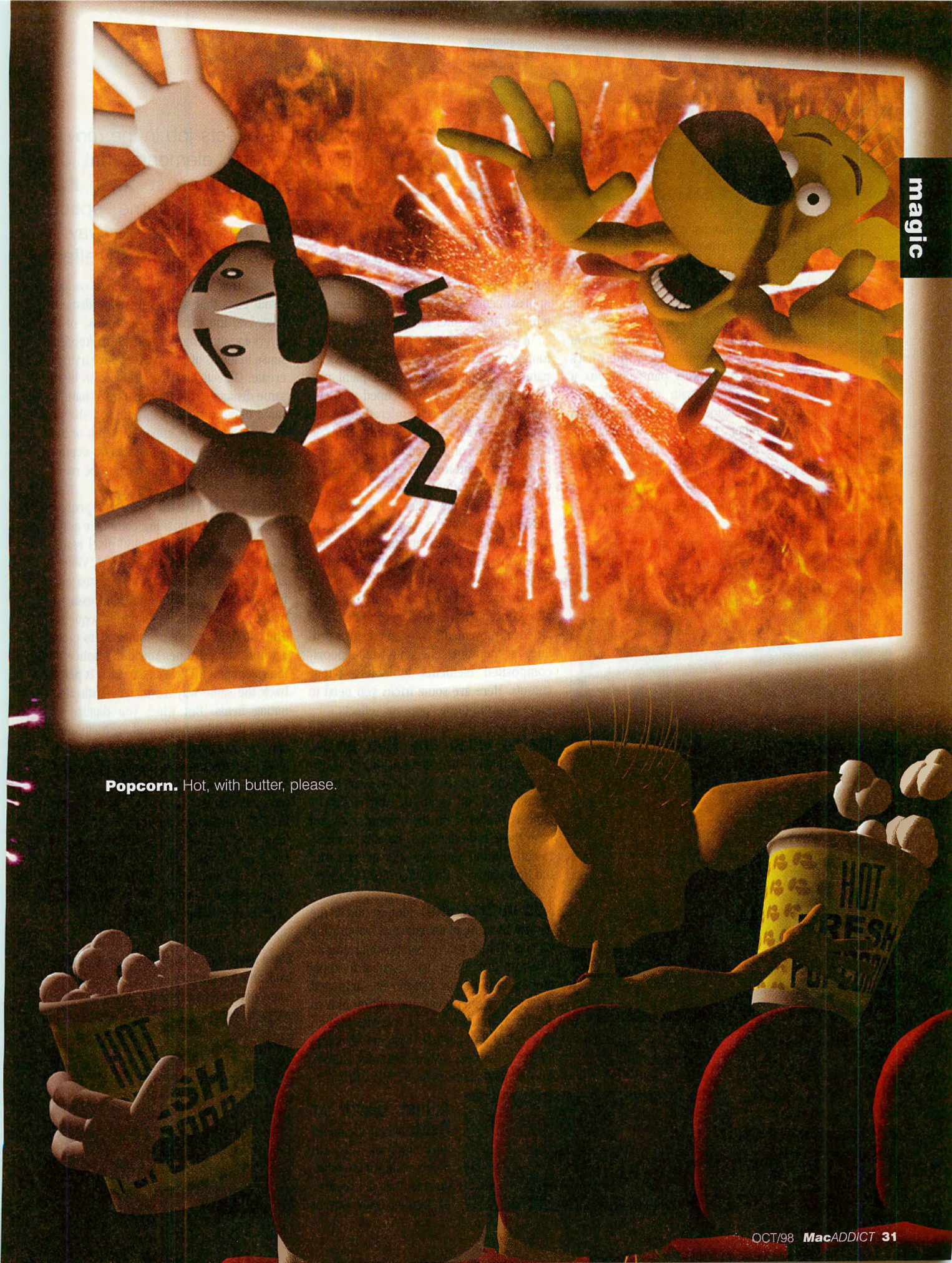
Advanced effects. Alien environments, nuclear blasts, weird morphing creatures—all you need is Adobe Photoshop, Final Effects Complete, and Elastic Reality.



Compositing. Assemble video, animation, and still art into an impossible-to-shoot fantasy with Adobe After Effects.



Bluescreen and rotoscoping. Using Ultimatte and Commotion, put your actors (or other real objects) into scenes where they've never been.



Popcorn. Hot, with butter, please.

Compositing

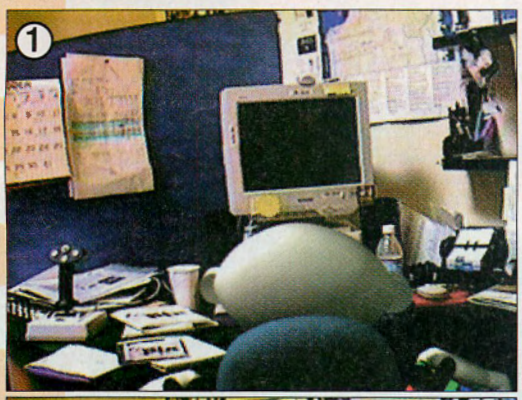
Every special effects job in the movies involves several elements that are composited together so that they appear to share the same space. Layering elements in a believable way is more than half the work of creating any effect.

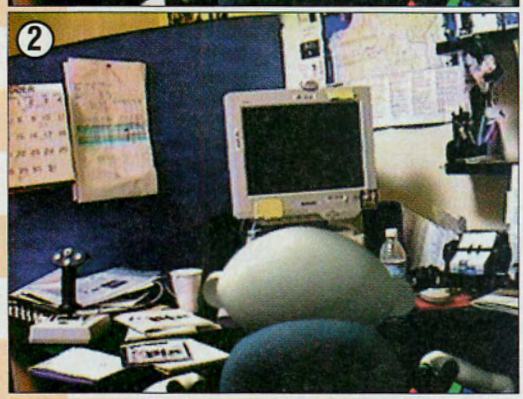
Think of a composite as a stack of glass panes with artwork painted or pasted onto them. On each pane, you use a paper mask to paint only on a specific area of the glass; the unpainted part of each pane is transparent and shows what is below it. Sometimes you might use semitransparent paint to create a blending effect with what's underneath. The lowest pane contains a background image with no transparent areas. Now imagine that each pane has its own movement. A camera, which can itself move, is mounted above the panes and photographs them as they move. Assemble that in your mind, and you have a very good approximation of how a compositing system like Adobe After Effects works.

A single composite can contain video footage of actors and environments, 2D painted elements created in a paint program, bluescreen or rotoscoped elements from video, 3D objects rendered in an animation program, such layered details as fake shadows or reflections, particle and filter effects, and mattes to protect areas of the background image that must appear to be in front of the other elements. After Effects allows you to layer these effects, move them around, animate them, and tweak the way they fit together until they look seamless.

Seamless and *convincing* are the operative concepts here. Subtly wrong details of an edge, movement, color, or texture produce a "pop-out" effect in which poorly composited elements look like paper cutouts. Here are some tricks you need to know to avoid these "pop-out" effects.

FILM AND VIDEO GRAIN gives reality to comps. At top, Max is too squeaky clean to have ever been shot with a real camera. Below, a noise filter blends him in with the grainy background.





MINI TIP: Want superprofessional film-grain quality? Get DigiEffects' CineLook (http://www.digieffects.com, $695 SRP), an After Effects filter. It can match the film grain of any given film stock.

MOTION BLUR occurs around the edges of fast-moving objects. It's essential for realistic movement.



Match video and film grain.

One problem when compositing the synthetic with the real is the characteristic "graininess" of video or film imagery. Objects rendered on the computer do not have these imperfections. Luckily, it's easy to add grain to an image after the fact with the Noise filter in After Effects or Premiere.

Add motion blur.

Motion blur is the natural blurring of the edges of fast-moving objects. When you're compositing animation with live action, it's essential to apply motion blur to any fast-moving animated object. After Effects can add motion blur to any layer, but you can also create motion blur with the particle systems in Final Effects Complete (MetaCreations, http://www.metacreations.com, $1,195 SRP).

Adjust depth of field.

When a camera lens focuses on an object, it may leave other objects that are nearer or farther away out of focus. This depth-of-field effect contains visual cues that we use to judge distance. Likewise, the focus, or sharpness, of the layers in your composite must make visual sense in terms of the space you are trying to create. Objects that are supposed to be the same distance from the eye have to have the same depth of field. Use blur and sharpen filters to adjust the apparent depth of field of layers. A composite that has no depth of field will likely look too sharp to be real.

Deal with fields.

This is a problem when you're compositing computer graphics with video in 640-by-480-pixel resolution (smaller movies are exempt). Video is an interlaced format consisting of two video fields, each with half the lines necessary to make a whole image, shown in sequence. The two fields mesh, or interlace, to create a whole video frame. You don't notice the interlacing on a TV, because video is played back the same way it's made—with alternating fields. But when you digitize the movie, the video field lines are visible and can be extremely distracting. Moreover, any computer-generated elements you add won't have those lines, and therefore won't match the video. You must make sure that the 2D and 3D animation you create has been "field rendered," which simulates the look of fields. If your animation program can't field render, After Effects can remove the lines in the video, albeit with a degradation of image quality.

Video fields aren't noticeable when played back on a TV, but they are very distracting when viewed on a computer screen.





Anatomy of a Composite

Mark checks out a hot Microsoft shirt in this shot from *Escape from MacAddict.* The shot involved five layers of fire effects, animated char and burn marks, and shirt layers composited in After Effects to create the effect of the fire catching onto and wrapping around the shirt. Here's how the layers fit together.

Layer 5: To show the fire curling around and engulfing the shirt, we added a flame element appearing around the edge of the obscuring section of the shirt. We also added this element to the background.

Layer 4: As Mark held up the shirt, the cloth briefly put one rippling corner in front of the fire. Using another traveling mask, we cut out the other areas of the image and exposed only the rippling corner on this layer.

Layer 3: We created the fire effect with stock footage from ArtBeats' ReelFire 2 disks (http://www.artbeats.com, $499 SRP). In After Effects, we applied the Add mode to this layer, which adds the RGB values of every pixel in the flame to the values of the other layers and strips away the black background.

Layer 2: We duplicated the background layer and used a traveling mask to mask off an area of the shirt from the rest of the image. To darken this area and make it look burned by the fire, we applied a Brightness/Contrast filter. We animated the mask to grow with the fire as the shirt burns up.

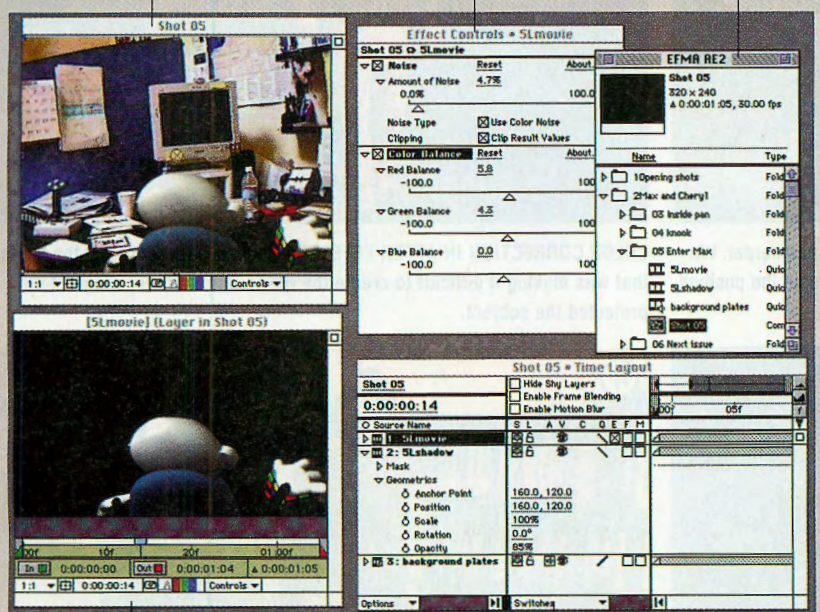
Layer 1: The background plate for this effects shot shows Mark from the original footage and the shirt without fire or burning cloth.



THE COMPOSITION (Comp) window is where you do most of your work moving and compositing layers.

THE EFFECT CONTROLS window allows you to layer After Effects' filters.

THE PROJECT window shows every file and composition in your project.



THE LAYER window shows information on the current layer, such as masking and the layer's center of rotation.

THE TIME LAYOUT window shows the keyframes created for each layer and allows you to manipulate them.

Inside After Effects

The de facto compositing program for the Mac is Adobe After Effects (Adobe, http://www.adobe.com, $995 SRP). This program is the only one described in this article that you absolutely must have if you expect to do serious effects work.

Using After Effects, you can take any kind of footage—QuickTime movies, Photoshop layers, even Illustrator files—and layer them in a composition window. You can also use one composition as a layer in another composition. After Effects features sophisticated, animatable, Bézier-based masking tools, as well as Boolean modes—such as Add, Multiply, and Subtract—that allow a layer to affect the layers behind it. After Effects' animation controls are superb—you can animate almost any attribute of a layer, from position and rotation to opacity and mask feathering, with a wide variety of options available for keyframe interpolation.

After Effects also allows you to do amazing things with filters and effects. For example, you can stack an unlimited number of effects together on the same layer, and the number of included and third-party filters is so vast it's impossible to describe them all here. (For a taste, check out the section on "Particle Animation and Filters.") Plus, with the more expensive Production Bundle version ($1,999 list), you get other nifty features such as motion tracking and stabilizing, advanced matte manipulation tools, and a complete scripting language.

Bluescreening

How do you put actors or other real objects into footage they never really were in? With bluescreening. Shoot your subject in front of a blue screen, then use plug-in software to strip out the blue values from the resulting footage, leaving you with a clean image ready for compositing.

The best bluescreen plug-in for After Effects and Premiere is Ultimatte (http://www.ultimatte.com, $1,500 SRP). Ultimatte can do superb mattes of such hard-to-matte things as smoke, hair, shadows, and pouring water. However, it ain't cheap, so you may want to try the bluescreen filters in Premiere or After Effects, which produce passable results. Another possibility is a Photoshop plug-in called Primatte, which rivals Ultimatte quality for only $200. However, you have to turn every movie frame into a PICT and process it in Photoshop. (An After Effects version is promised soon.)

No matter what bluescreen solution you're using, the technique is pretty much the same.

Step 1: Shoot a background plate with the camera locked down. A moving camera will require extensive match moving later, which you don't want to have to do.

Step 2: Duplicate the camera angle and light sources on your bluescreen stage. You can also create blue objects to match specific things your character may seem to touch or cast shadows onto. Then shoot your subject. (See "Raf's Rules for Shooting Blue" for details.) If you're using Ultimatte, be sure to shoot a correction plate of just the blue background—you'll need it to do color corrections later.

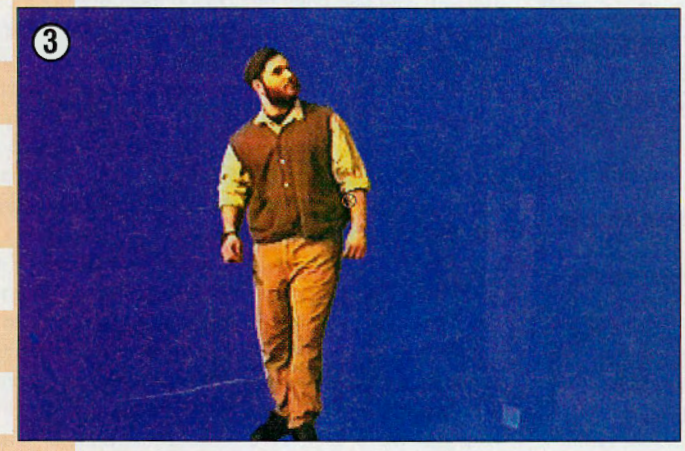
Step 3: Digitize your footage. Video-in boards almost always shift the color of the video somewhat, so watch out for unnatural red tints in your bluescreen (very bad) and correct them with your digitizing



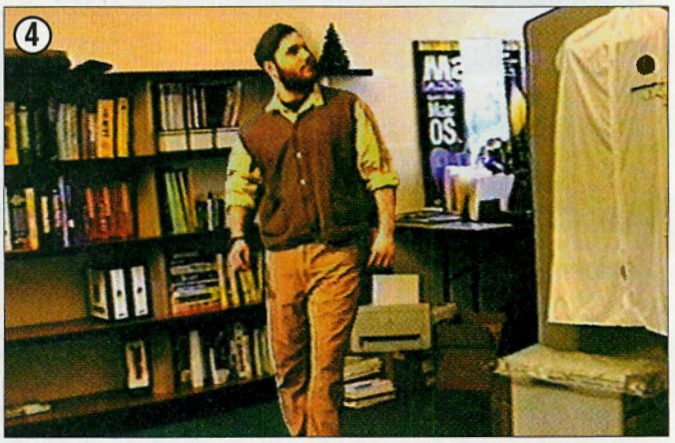
THIS IS THE ORIGINAL BLUESCREEN image, shot with a Hi-8 camcorder. We used the wooden shelf in the middle of the screen to approximate the position of an object Raf had to walk around.



COLOR CORRECTION IN AFTER EFFECTS removed a red tint from the screen that was making it difficult to create the matte. A temporary rough matte protected the subject.



THE SCREEN CORRECTION FILTER in Ultimatte "flattens" blue tones in the background to help the Ultimatte filter create an accurate matte. Notice that shadows remain darker than the rest of the screen even after screen correction.



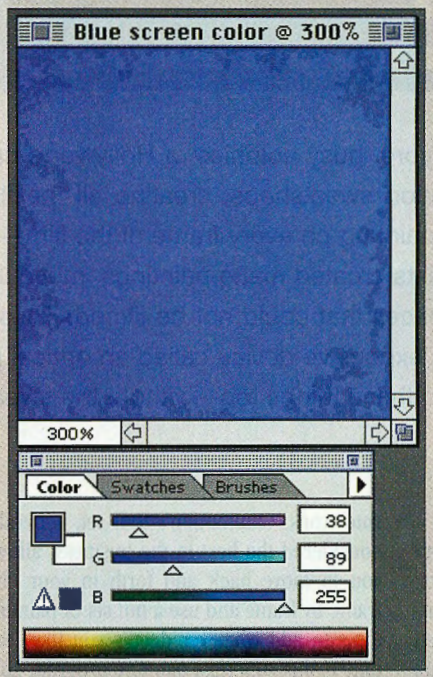
HERE'S THE FINAL ULTIMATTE FIGURE composited over the background and shown in After Effects.

Looking for Blue

For bluescreening to work, you must have the right blue. Using a screen with too much of the wrong color can be disastrous, especially with Ultimatte. It actually doesn't have to be blue; green and even red will work, although blue is traditionally used and somewhat easier to find. Whatever color you use, it must be as close to the pure digital version (as seen on your Mac screen) as possible.

The general mix for a bluescreen blue is half as much pure green as pure blue, and half as much pure red as pure green. You can't buy that color paint at your local hardware store, but you can buy special digital Ultimatte paint (the same stuff used by the pros) from Composite Components (213-257-1163, http://www.digitalgreenscreen.com). At a mere $120 a gallon, it's even more expensive than a bucket of Martha Stewart Aegean White Latex.

If that price seems steep, we found a near-perfect bluescreen fabric available at any decent dry-goods store for around $3.79 a yard. It's Skipper Blue 09025, a 65 percent polyester, 35 percent combed-cotton fabric made by Springs, Fort Mill, North Carolina 29715. If you buy a whole bolt, you get a discount.



THE BASIC FORMULA for bluescreen blue: half as much pure green as pure blue, half as much pure red as pure green.

MINI TIP: Shooting bluescreen of actors running around? Don't forget to put bluescreen fabric or paint on the floor under their feet.

Raf's Rules for Shooting Blue

Rule 1: Shoot the background plate first. It's a bad idea to shoot on the bluescreen stage before the background is shot, since it's easier to alter the lighting on the bluescreen stage to fit the background plate than vice versa. The only exception to this rule is if you plan on generating the background entirely on a computer.

Rule 2: Measure the background. Use a measuring tape to figure out the distance from the camera to the subject, how high the camera is, where all the important lights are, and the length and height of important objects in the scene. If you're shooting your original footage outside, note the time of day and where the camera is pointing relative to the sun. You'll want your bluescreen set to match these details as closely as possible. Sometimes you won't be able to take these measurements. The background plates for *Escape from MacAddict*, for example, were shot 3,000 miles from the bluescreen stage. In a case like that, you'll just have to eyeball it.

Rule 3: Find a good stage. There are fully equipped video studios in most towns with public-access cable channels. These places have lighting setups, big stages, and even cameras and other video equipment. Call the station and beg until somebody lets you in. If your background plate was shot outside, you will of course want your stage outside.

Rule 4: Don't use anybody else's bluescreen. The blue drapes in TV studios are the wrong blue altogether. Use only your own blue paints or fabric (see "Looking for Blue" for more information). The blue area doesn't have to cover the entire frame—just the area where your subject is. You can remove any other areas later with a quick "garbage matte."

Rule 5: Get the lighting right. The lighting on your set should be as close as possible to the lighting in the original shot. Use the background plate as a reference. Minimize tonal variations across the bluescreen.

Rule 6: Lock down that camera. Put it on a tripod, tape the legs to the floor, and don't jiggle it. Don't even think about a pan or other camera move, at least until you've attained master level. You should also turn off the camera's autofocus and auto-iris (aperture) features.

Rule 7: Do a test composite onsite. If everything matches up, great. If not, make changes and shoot it again.

software prior to digitizing. Look out for compression artifacts introduced into the blue areas by JPEG compression. Only Ultimatte can easily deal with these artifacts. If you're using any other software, don't use a JPEG compression video board.

Step 4: Bring the resulting clip and the background plate into Premiere or After Effects. Then apply the bluescreen filter to the bluescreen clip. Chances are you'll have to do a lot of adjusting to make it look right. Premiere features sliders that allow you to adjust how many blue values to make transparent, how much softness to apply to the matte, and other effects. Play with the sliders until you've removed all blue tone from the bluescreen background without creating "holes" in the subject where blue color spilled onto it. After Effects has more controls, allowing you to "choke" a matte, or bring its edges in slightly, to create a more natural edge.

With Ultimatte, you can use the correction plate you shot to "flatten" all the blue tones in the background to one tone while preserving the subject and its shadows. This, in conjunction with Ultimatte's fine-grain and spill-removal tools, generates a near-perfect matte in a few minutes, assuming you shot the footage correctly.

If you still can't pull a good matte, you may have to call in some help. When a bluescreen background we used on *Escape from MacAddict* turned out to have too much red for Ultimatte to handle, we did some hand rotoscoping in Commotion to create a rough matte to isolate the subject, then used a Levels filter in After Effects to remove all the red values in the background. This left the image ready for the Ultimatte process, which was able to pull finer details such as hair and shadows.

Step 5: Now that your bluescreen composite is done, look at how well the elements fit together. If the foreground doesn't seem to fit, try color correcting it to match the background better—use the colors of shadows and skin tones as a guide. Adjust the color balance, levels, and brightness and contrast until the two elements blend smoothly together.

Rotoscoping and Matte Painting

In days of yore, busy colonies of Hollywood craftsmen toiled away in charming little animation sweatshops, creating all the film effects we know and love by laboriously painting on every frame of the film—a process called rotoscoping.

Other movie artists created matte paintings, meticulously painted backgrounds (usually on glass) of places that could not be filmed. These were integrated with live-action elements using an expensive device called an optical printer.

Now you can do these things too—without the sweatshops and the optical printer.

Using Rotosplines

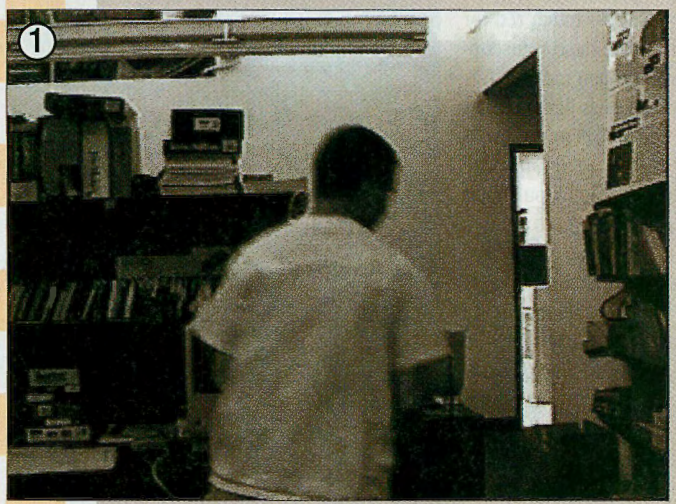
Rotoscoping involves painting on every frame of your movie to create an effect. It's laborious, but there are effects that cannot be achieved any other way, such as when particle effects or stock footage simply can't create that particular lick of flame you need to come crawling around the door. While software can help, there's no way around the fact that at some point you have to roll up your sleeves and start painting those frames. Even effects that you can mostly generate using other techniques benefit from enhancement with hand-painted work.

Puffin Designs' Commotion 1.5 (Puffin Designs, http://www.puffindesigns.com, $2,495 SRP) is the Mac app of choice for roto work. Commotion's tool set, generally considered the best in the business, allows you to move back and forth in your clip frame by frame and use a full set of painting tools to add whatever details you like. Not only is this superfast painting program able to play back most clips at full speed as you work, it also has unique tools, such as rotosplines, that make roto much easier. Basically, rotosplines allow you to enclose an area of the frame with splines and then animate the splines across a range of frames. For example, you can use rotosplines to outline a moving object in your movie by outlining it in the first frame and in the last frame. Commotion will figure out the intermediate positions of the splines. A certain amount of tweaking is usually needed, depending on how smooth the motion is, but it sure beats drawing the matte entirely by hand on every frame. Once the rotospline work is complete, you can use the splines to create a perfect moving matte.

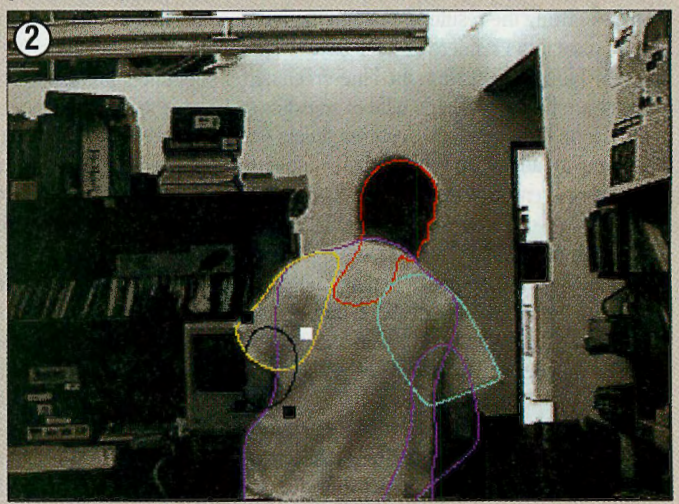
Here's how we used rotosplines in one shot from *Escape from MacAddict*. We wanted Wade to be blown down by the shock wave from the laser explosion, but no footage of Wade had actually been shot. To create the effect, we took black-and-white footage of Wade from a previous *MacAddict* production and brought it into Commotion. There we were able to cut him out *and* colorize him so that he fit in with the rest of the footage.

Firing Up RotoWade

THE ORIGINAL SHOT OF WADE shows him tripping over a Mac Plus against the plain background of the *MacAddict* interior.



USING COMMOTION'S ROTOSPLINING features, we quickly and accurately outlined Wade. Notice that each limb has its own spline, sort of like a jointed paper doll—this allows Commotion to roto movements more quickly. We used the splines to generate a matte that cut Wade out from the background, and to generate a separate movie with flat color areas where we had to recolor Wade.



Matte Painting

Matte paintings are a different breed of effect. You don't have to be Bob Ross to create a happy little matte painting—in fact, a good digital matte painting doesn't necessarily need a single stroke of the Brush tool. You can do a lot using a collage of photographs and blending them with the Clone and Layer tools in Photoshop. This is how we created all the matte paintings in *Escape from MacAddict*. We took stills grabbed from video of the *MacAddict* offices and pieced them together to create views of the interior that weren't in the original footage. We were even able to create some places that don't really exist, but look as if they do.



WE CREATED THIS PANORAMIC view of a fake *MacAddict* interior with the help of several background images put together in Photoshop. We painted over the joints between them with the Clone tool. Notice that there's a lot of garbage around the edges, which wasn't important, as the camera was never going to see it.



WE PUT TOGETHER this exterior view in After Effects to preserve the waving of the trees and other moving areas. Note: The sign isn't real.

MINI TIP: Can't swing $2,500 for Commotion? Use After Effects' animated masking tools instead of rotosplines. While they aren't nearly as flexible or powerful as Commotion's tools, they'll do the trick. If you need to paint on every frame, just convert your movie to numbered PICTs or a filmstrip. Then get to work with Photoshop. Good luck!

WE BROUGHT the black-and-white Wade clip and its corresponding flat color version into After Effects, with the flat color layer on top. Then we applied After Effects' Color mode to the flat color layer, which in effect replaced the blacks and whites in the Wade clip with color from the flat color version.

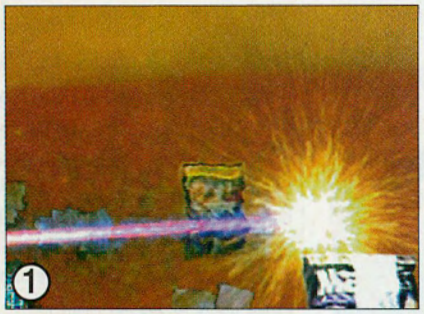


WHEN HE'S COMPOSITED with a fiery surprise, it's hard to tell that Wade was not an original part of the background plate.



Advanced Effects

As any effects wizard will tell you, creating cool eye candy is the fun part of movie magic. Ratchet up your epic's dazzle quotient with particle systems, morphing software, and slick match moves.

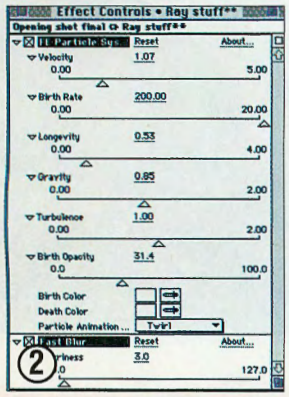


THIS RAY BEAM EFFECT is a conglomeration of different filters applied in After Effects. A ray gun effect from DigiEffect's Aurorix filter collection created the basic beam.

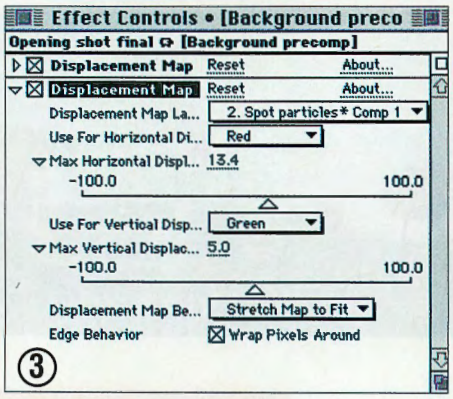
Particle Animation and Filters

Particle systems are tools for animating gases, liquids, and flames—anything from splashing coffee to exploding walls. For *Escape from MacAddict*'s particle effects, we used Final Effects Complete (MetaCreations, http://www.metacreations.com, $1,195 SRP), a suite of plug-ins for After Effects.

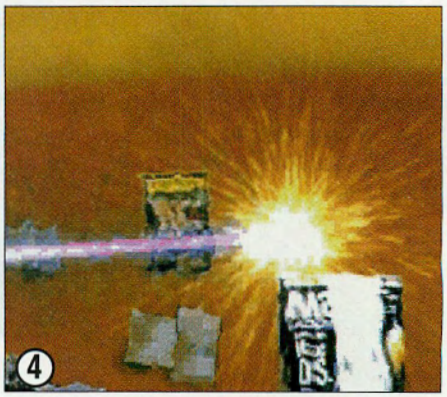
In particle systems, a large number of small objects emit from a point in space and move according to a set of rules you can modify. To create fire, choose a particle type—maybe fuzzy round red-yellow objects that blend together. Set the particles to emanate from the base of the fire; that point is called the emitter. Then give the particles a "fire behavior" by assigning them a life span and setting them to rise into the air. Here's how we created *Escape from MacAddict*'s laser blast.



WE USED the Final Effects Particle Systems filter to control a spray of green particles from the ray, with the entire area of the ray used as the emitter.



THEN WE BLURRED the green particles using After Effects' Blur filter and used them as the basis for a Displacement Map. This made the air around the ray ripple with heat.



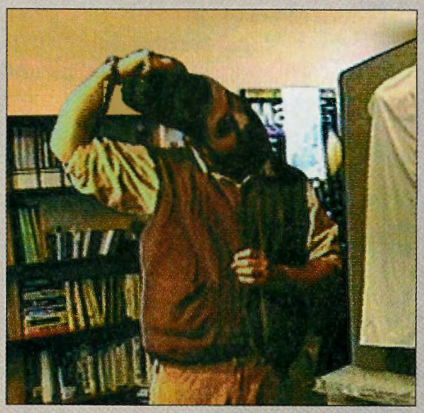
A BURST OF PARTICLES at the end of the beam completed the effect.

Morphing

Morphing and its lesser-known sister technology, warping, have many uses beyond turning Granny's face into Rover's. Today, the trick is used mainly to blend shots together in interesting and innovative ways. If your movie calls for an actor to say something to the camera, then turn around in the same shot and jump off a cliff, you need morphing to exchange your actor for a real or computer-generated stunt double. Do it right and your audience won't notice the change.

Both morphing and warping work from the same idea—using points, grids, or shapes to stretch and reshape an image. The only difference is that morphing takes two images or movies and distorts one into the other, while warping applies distortions to one image alone.

For *Escape from MacAddict,* we used Elastic Reality (Avid, http://www.avid.com, $1,200 SRP) to create professional-level shape-shifting.



DENNIS TAKES OFF the rubber head of Raf in *Escape from MacAddict.* In reality, Raf is miming taking off his head, but only removing his cap. We used warping not to stretch the mask, but to create the movement of the upper arm and elbow as Raf pulled off the mask.

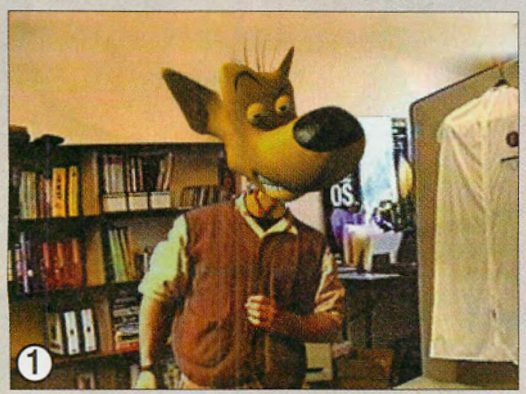


IN ELASTIC REALITY, we used the red spline outlining the head to create the rubber-head warp. The pink spline shows the end position of the stretched-out head as the hand pulls it off. The red spline that surrounds the whole area protects the rest of the body from the warp.

Match Moving

One of the hardest effects you can pull off is to match the movement of one element of a shot to another. Say you're putting a bluescreened actor who's standing still into a background that's afflicted by serious camera shake. If you don't make the actor shake in exact synchronization with the background, the composite will look ridiculous.

You can do match movements by hand in After Effects, but life is short and we don't advise it. The After Effects Production Bundle ($1,995 SRP, including the standard version of After Effects) has great tools for automatically tracking composited elements onto other elements of the scene.



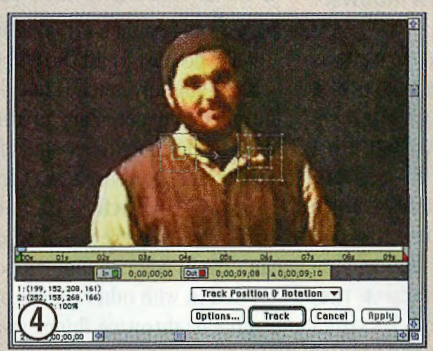
THIS SHOT OF DENNIS'S 3D animated head on Raf's body—which was moving—required After Effects' Motion Tracker plug-in.



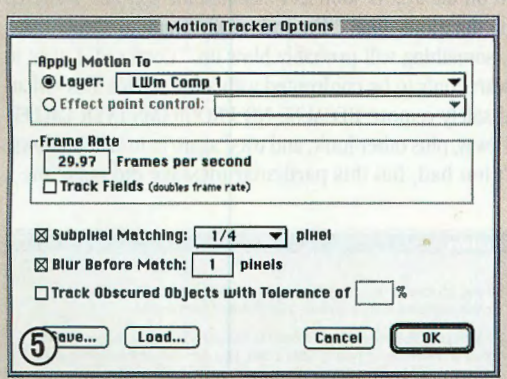
THE SHOT BEGAN as a bluescreen shot of Raf with the head removed using a rotoscoped matte.



WE RENDERED DENNIS'S head with an alpha channel so it was ready to composite.



WE USED TWO POINTS on the collar that were easy to track.



REDUCING THE SUBPIXEL MATCHING value increased the accuracy of the track. This makes the program track in smaller increments.



AFTER SCALING AND ROTATING DENNIS'S HEAD, we applied the tracking data to it. Voilà—they match!

Conversational Effectspeak

Special effects artists speak an especially obscure dialect of technobabble, originally derived from the argot of filmmaking. This short lexicon should get you through any typical effects-filled conversation.

Alpha channel: The last 8 bits in a 32-bit image. Used to set the transparency levels of the image for compositing.

Background plate: The background image of a composited shot.

Clean plate: A shot without any characters or action in it, which you can use as a background plate for other elements of a shot, or to help paint out unwanted areas on an image or movie.

Composite (comp): A shot composed of one or more movies or images layered on top of each other through the use of mattes.

Frames per second (fps): The number of individual images (frames) displayed every second to create the illusion of motion in video, film, or a QuickTime movie. Video displays frames at 30 fps and film, at 24 fps. QuickTime has no set frame rate.

Keyframes: Significant or key positions that define an animated movement in 2D and 3D animation programs. You specify the key positions of objects or layers on the important frames, and the computer fills in (interpolates) the in-between movements.

Match move: The scut work of matching camera moves, jiggles, and vibrations in shot footage with equivalent camera moves created in the computer so that you can add computer graphics elements that look as though they belong in the scene.

Matte: A black-and-white image or movie used to make part of another image or movie transparent, allowing it to be composited with other footage. When used in a computer graphics context, matte usually refers to an alpha channel.

Matte painting: A painting that is used to add an artificial background to a shot, extend the horizon line, or create fabricated shots.

Motion blur: The blurring that occurs around the edges of a fast-moving object. To look realistic, objects created on the computer need the same type of blurring.

Rotoscoping (roto): Adding an effect, such as a glow or ray, to a shot by painting on a succession of frames with a program such as Photoshop.

Contributing editor Raf Anzovin is actually a composited 3D animation, but the effect is so well done that even his family and friends don't realize it.

#@!win98

My LOUSY Summer with Windows 98

BY ROBIN WILLIAMS

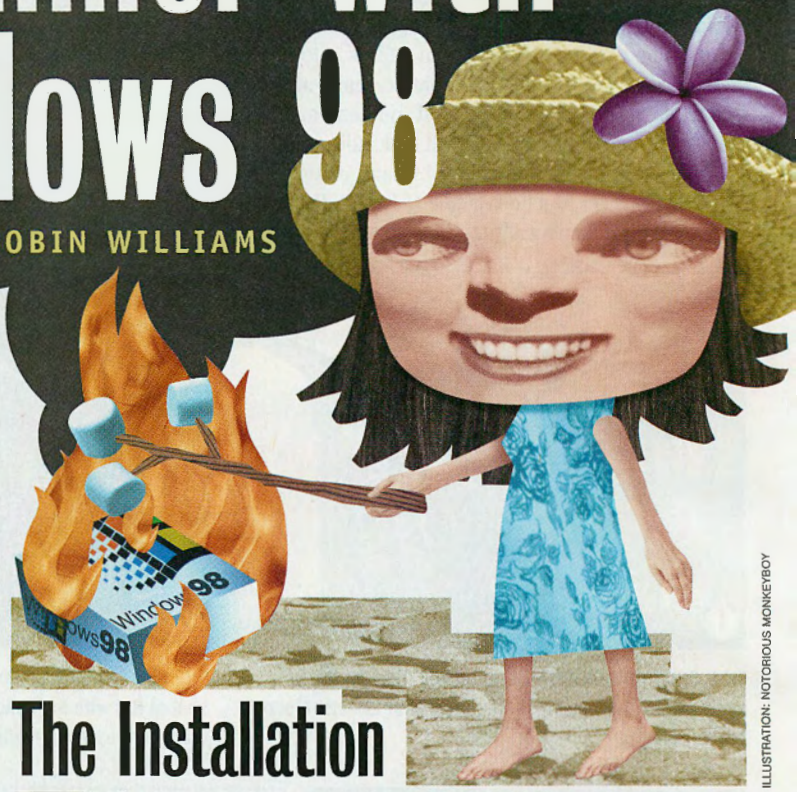


ILLUSTRATION: NOTORIOUS MONKEYBOY

EDITOR'S NOTE

We are bad people. We knew that Robin Williams, the celebrated Mac author of such classic tales as *The Little Mac Book*, *The Mac is not a typewriter*, and *The Non-Designer's Web Book*, had been coerced into working on a book that forced her to use a dreaded PC. We knew the hard-core Mac author was hating every minute of it. Did we help her take her mind off her troubles? No. Being the villainously hard-hearted editors that we are, we asked her to write about them instead.

I'm one of those die-hard Mac users who also has to use a Windows-based machine. I hate it. I mostly hate it because Windows is such a blatant rip-off from the Mac OS that it really galls me when I go into big office-supply stores, ask where their Macintosh stuff is, and hear that they don't carry Mac products because "Macintosh is too far behind Windows." It's a good thing I don't carry a gun.

I have been told more than once by ill-informed sales clerks that Apple doesn't make Macs anymore, and that Apple's market share is only 1 percent so no one makes software or peripherals for Macs any more, and that there isn't any Mac software anyway. Now, every time I go into one of those stores I wander up and down the aisles and very sweetly ask every single person who works in the store, "Excuse me, where are your Macintosh products?" Besides collecting dumb comments from salespeople, I hope to make every worker think there are lots of people looking for Mac products. I say, "Oh, that's too bad that you don't sell Mac products. This is a Macintosh town." Now in my local OfficeMax they are starting to answer me with, "Yes, I've noticed that!" I suggest that every one of you do the same thing in every office-supply store that sells Windows products. "What? You say there isn't any software for the Macintosh? That's the stupidest thing I've ever heard. Ha ha ha, you're such a moron!"

Anyway, back to the point.

I had to install Windows 98 on this stupid Piece o' Chit. So I went down to OfficeMax and, after politely asking every person in the store where they kept their Macintosh products, I PAID almost $100 for the new Windows 98. I REALLY HATE giving Bill Gates my money (scowl... sneer...pout).

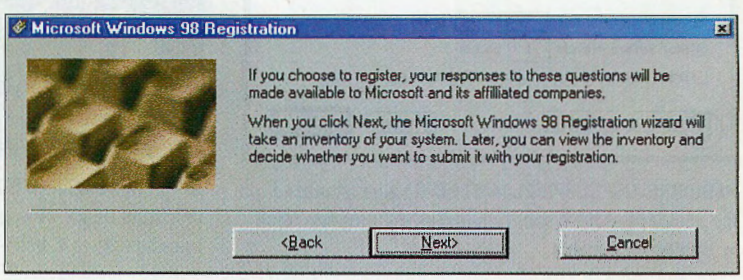
The Installation

The first time I tried to install Windows 98, I couldn't complete the process because IT REQUIRES 300 MEGABYTES OF HARD DISK SPACE. Oh, thank you very much (kick...kick). You can do a custom installation, I read, with the minimum necessary to run your computer, and that ONLY REQUIRES 180 MEGABYTES, but I never could find any button for installation options. It might have been there, but it sure wasn't anywhere a fairly savvy computer user might find it.

As a result, before I could install Windows 98 I had to purge my 1.2GB drive. Have you ever tried to remove programs from a Windows machine? You can't. Well, you can, but it's not easy, and because so many pieces of programs are tied in with other pieces of programs, you run a great risk of getting in big trouble by throwing things away. To lessen the danger and possibly even lower your insurance rates, one must use Special Removing Software to remove files.

I went back to OfficeMax, and after politely asking every person in the store where they kept their Macintosh products, I bought some software that said it would get rid of stuff I didn't need on the PC. As soon as I installed the software it started asking me to make tough decisions like, "Do you really want to throw away USELESS1.MFW? If you do, something will probably blow up." Confused, I went to another section of the software, only to be confronted with a list of .DLL files (whatever *they* are) that I could safely remove BECAUSE NO PROGRAMS EVER CALLED ON THEM. I threw them all away, plus other junk, and tried again to install Windows.

The installation wasn't too bad, but this particular message did make me a little nervous:



Plug and Pray, and Pout

That night things worked fine as I poked around. But the next day and forever after, every time I started my computer I got this message:

"A device has been specified more than once in the SYSTEM.INI file, or a device specified in SYSTEM.INI conflicts with a device which is being loaded by an MS-DOS device driver or application or a device loaded from the registry file. Remove the duplicate entry from the SYSTEM.INI file, and then restart Windows.

Duplicated device: ucd

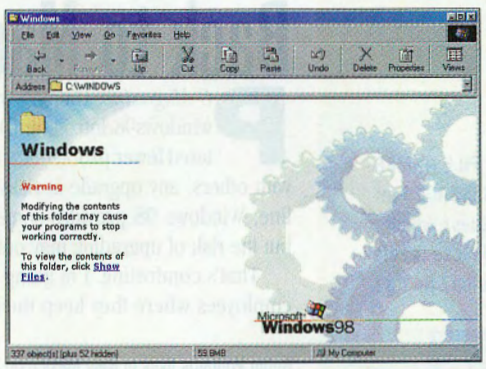
Press a key to continue_"

I press the A key, which I guess replaces the "any" key that no one could ever find, and the machine starts up. Now I simply ignore the message, but why did the system put a stupid duplicate in the INI anyway? It should have known better.

Later on, as I'm investigating the new system, which doesn't seem that new after all and I don't quite know what all the fuss is about, I notice on my desktop that all my Netscape Communicator shortcuts have turned into Internet Explorer shortcuts. Is that a clue? A hint? A friendly suggestion?

Annoyed, I go into the Windows Add/Remove Software utility and try to remove Microsoft Internet Explorer 4.01. Impossible: YOU CANNOT REMOVE INTERNET EXPLORER FROM THE COMPUTER. Windows 98 is so totally integrated with Internet Explorer that it is impossible to remove the browser. Heaven help people who just use their computers to get their work done and have no interest in the Web, because Windows 98 makes the Web appear in front of your face—in Internet Explorer, of course—when you click just about anything anywhere.

Another thing I immediately noticed in Windows 98 is that everything is so SLOOOOOOOWWWWW! It took 44 seconds to open an application with a one-color file in it. It took 23 seconds to open a small, two-color file in Adobe PhotoDeluxe WHEN THE APPLICATION WAS ALREADY OPEN. It took 14 seconds to quit the dang application. Now, I'm not doing professional testing with official benchmarks and all that, but it does seem to me that it shouldn't take NINE seconds to redraw a word processing page when you're bouncing from a Web page to the word processor. Nor should saving three paragraphs of word processing text take FOUR seconds and lock up the computer while it's doing it. Even opening a folder window on the desktop takes NINE to TWELVE seconds to open the first time. I would have had this article finished last week if I'd done it on my Mac.



I GUESS THESE FANCY GRAPHICS right inside EVERY WINDOW is what makes folder windows so slow to open.

Dang. My scroll bars disappeared. I HATE it when that happens.

I decided to start taking some screen shots for this article and discovered that my screen-capture software doesn't work anymore. Why not? Because IT'S MISSING A DANG .DLL FILE, whatever that is. I head online to download a new shareware copy, but the one I like is no longer available at Shareware.com. I decide to take a risk and download something I haven't tried before called Screen Clip. I download it, and of course it's compressed. So I use WinZip (which is like StuffIt for the Mac) to decompress it, because on the PC files don't automatically decompress when retrieved from the Internet, as they do on the Mac. But guess what? My WinZip won't work anymore BECAUSE IT'S MISSING A .DLL FILE, whatever that is.

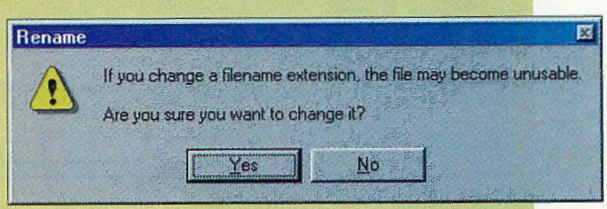
I head online once again. I download A NEW COPY OF WINZIP, install it, and then use that to decompress Screen Clip. I use it for several days and take tons of pictures

LAME LEFTOVERS

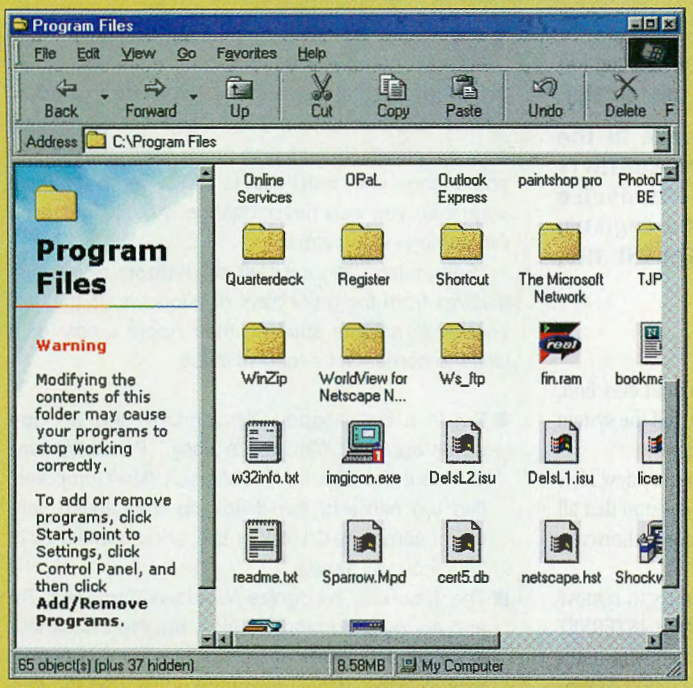
Windows 98 offers a host of "improvements" over Windows 95. Not only does it suck up 300MB of hard disk space and force you to fend off Internet Explorer (Steve Jobs's browser of choice!) on a daily basis, but it's also really, really slow! And if you change your hard disk to FAT32 as the manual suggests, you can never change it back and even more things won't work.

Fortunately, Windows 98 still harbors a few *misfeatures* from the glory days of Windows 95 that will keep Mac addicts sporting their Apple logos for a while to come. Get a load of these:

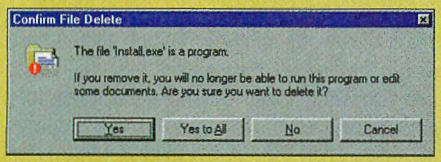
- Put in a disk—floppy, Zip, or CD—and an icon never appears. "Oh, that's easy," PC users say. "Just put the disk in, double-click 'My Computer,' find the name of the drive you want (such very clever names as C:\, A:\, or E:\), and double-click it. Your icon will appear."
- The Mac can recognize Windows-formatted Zip and floppy disks and PC files, but the PC cannot see a Mac-formatted disk. Tip: You can sometimes trick Windows into thinking it knows how to open a file by putting the correct three-letter extension on the end of the file name.
- There is no way to customize your font menu. Adobe Type Manager Deluxe lets you open just the fonts you want, finally, but there is nothing that lets you see the fonts displayed in the menu in their typeface, nor can you customize the font menu in the variety of ways you can on the Mac. You can't even group font families together. But judging from the number of copies I've sold of *The PC is not a typewriter,* most PC users don't seem to give a hoot about fonts anyway.
- To get an em dash (—) you have to hold down the Alt key, then make sure NumLock is on, type *0151,* then let go of the Alt key. It's the same for almost all special characters. Then when you take that file to a Mac, all the special characters disappear.
- Because the "wizards" do everything for you and put files all over the place and leave some behind after they're used, you never really know what you have in your computer, what you can safely toss, or what you can move or organize. (I don't like the feeling of not being in control of my dumb computer.)
- You can't change the names of half the file icons in the computer, especially the icons for applications. Look at the dialog box you get if you try to change the name of PM65.EXE to PageMaker (which it is):

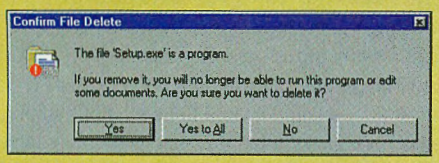


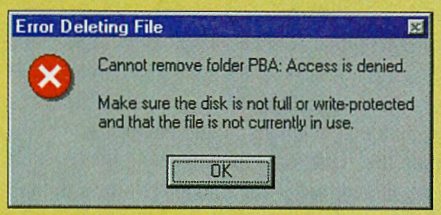
SCREENSHOTS FROM THE EDGE



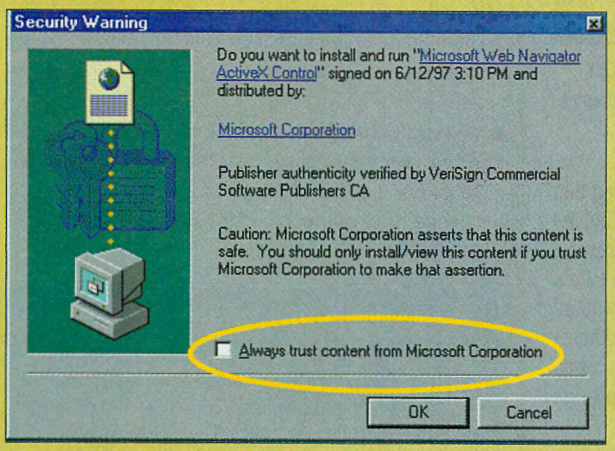
WHAT ARE ALL THESE FILES? I don't know. Whose readme is that?







I LOVE THE FILE NAMES AND THE MESSAGES in Windows. Guess which program this .exe is referring to. Give up? So do I.



HA HA HA HA HA!!

of stuff on my screen until I notice a little message that says, "If you buy the professional version of Screen Clip, WE WON'T PUT 'SCREEN CLIP' IN A BIG UGLY BOX ON THE FRONT OF EVERY SCREEN SHOT YOU MAKE." I look at my screen shots and sure enough, there's the big ugly box. It's getting very close to my deadline and my editor is getting nervous. I go back online and finally find Screen Thief for Windows at its own Web site (http://pandasw.com/stwin.htm), which proudly tells me the product comes with a very nice manual in Japanese. Great.

By this time, of course, I'm so CRABBY (kick... kick...smack) that nothing about Windows 98 is going to make me happy. However, this much was immediately obvious: Windows 98 is definitely geared to the corporate business user who is connected to a fast Internet connection 24 hours a day. Every single thing in the system is structured around the Internet, using, of course, Internet Explorer. In fact, you can click a very attractive sidebar on the desktop anytime to go to useful places on the Internet, such as, say, Disney and the Warner Brothers shopping center. How did Microsoft know that I visit these sites every day and would appreciate desktop quick-click access? Amazing!

Microsoft must employ mind readers, because the company also seems to know just what software I might want to use and graciously installs it for me—without even asking. Windows 98 installed 32.4 MEGABYTES of software in case I ever want to use Microsoft's WebTV (which, of course, I can't use until I buy and install a TV tuner card). It also installed 29.4 MEGABYTES of "desktop themes," 12.1 MEGABYTES of multilanguage support, and 4 MEGABYTES of accessibility tools for people with hearing, mobility, or visual impairment, all without asking whether I needed or wanted these. So thoughtful.

Back to Mac

PC Magazine (http://www.zdnet.com/pcmag/features/windows98/intro4.html) said, "Although we encountered fewer problems with Windows 98 upgrades than with others, any upgrade is risky. If your current system runs fine, Windows 98 provides some incremental improvements, but the risk of upgrading may outweigh them."

That's comforting. I'm going back to OfficeMax to ask the employees where they keep their Macintosh products.

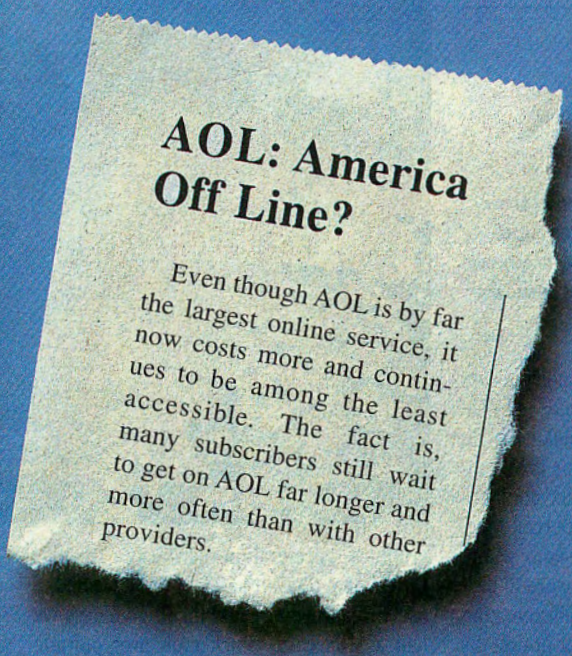
Robin Williams lives in New Mexico on 2.5 acres of piñon forest with several kids, lots of dogs, John Tollett, an outdoor pool table, lots of Macs, and one lousy PC.

ROBIN'S DEEP THOUGHTS

I read that Windows 98 CORRECTS 3,000 BUGS that were in Windows 95. In the demo of Windows 98, with the porn-flick music grooving in the background, is a section where Microsoft elaborates on the "Improved" and "More Reliable" features. I've always thought "Improved" was an odd thing to put on your product packaging. It sounds as if you're actually saying, "Our last version was so stupid, but this one is really good. Really."

EarthLink Network TotalAccess software is included on the enclosed CD-Rom

These days, many AOL users are finding themselves S.O.L.



AOL: America Off Line?

Even though AOL is by far the largest online service, it now costs more and continues to be among the least accessible. The fact is, many subscribers still wait to get on AOL far longer and more often than with other providers.

Access, of course, is everything. And if you're looking to AOL to provide it, you're *?!# out of luck. With EarthLink, you'll find that we're up 99.9% of the time. You also won't be burdened with the annoying busy signals and disconnects AOL is famous for (nor their high prices: we're still $19.95 a month). And because we have more local access numbers than any other Internet Service Provider, you can also get on the Net more easily. Speaking of easily, that's how you can get in touch with us. Our phone number is cleverly listed below. Talk to you soon.

PC MAGAZINE ISP RATINGS (9/97)		
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Average Throughput (download speed)	Excellent	Poor
Web Throughput Success	Excellent	Good
Overall Performance	Good	Poor

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reviews

Summer's over, but the Mac legends of the fall have arrived.

FREAKIN' AWESOME
The most valuable products, the coolest gizmos.

SPIFFY
A solid offering. Overall a good investment.

YEAH, WHATEVER
A few good features, but generally a waste of time and money.

BLECH!
We hate to even blotch our pages with the thing.

Unreal

FUN & GAMES

COMPANY: MacSoft
CONTACT: 800-229-2714 or 612-509-7600, http://www.wizworks.com/macsoft
PRICE: $49.95 (SRP)
REQUIREMENTS: PowerPC 603e 180MHz or faster, System 8.0 or later, 32MB of RAM (64MB recommended), 40MB of free hard disk space for minimum install (400MB for full install), CD-ROM drive, hardware acceleration recommended



UNREAL IS THE PERFECT DESCRIPTION for this otherworldly, haunting environment where you either escape or die. Look at these amazing lighting effects, thanks to Voodoo2 power.

Unreal may be the best action game ever to flash across a computer screen. Better than Quake and Quake II? Oh, yes. Yes, indeed. Visually, the game is breathtaking. Even without graphics acceleration, Unreal looks awesome on a superfast Mac. It's like walking through a museum where each room brings some new treasure to dazzle you. But be careful, this is a different kind of museum. It's late at night, after hours; the doors are locked; and alien museum guards, slobbering attack dogs, and a SWAT team from hell are scouring the corridors looking for you. Tarry to admire a painting, and they'll swoop down and rip you to shreds.

Spectacular graphics come at a price, however. Unreal has unreal memory requirements. Loading the complex texture maps in high detail requires you to give 80MB of RAM to the application, so get virtual memory revved up or get that extra DIMM or two. And take our recommendation of a G3 with 3D graphics acceleration seriously. To play Unreal on a G3 with 64MB of RAM, we had to use virtual memory, and thank goodness we had a 3Dfx card, which took over polygon processing, alpha blending, and bilinear filtering. At 640 by 480, frame rates went as high as 50 fps, but 20 to 40 fps was average—accelerated Unreal is sublime.

Although Unreal pushes the limits of hardware, it's ready for tomorrow's technology. For the ultimate in visuals, the power of a Voodoo2 card almost doubles frame rates. Also, with Voodoo2 you can run the game smoothly at 800 by 600 for added detail—all without patching the original application. In fact, Unreal supports three different types of acceleration: software only, RAVE, and 3Dfx Glide. Unreal on a Voodoo2 card has no equal.

Enough about the awesome graphics. The game is filled with audio subtleties, too. Footsteps pad. Tortured humans cry out in the distance. Overhead fluorescent lights spit and hum. Exhaust fans whir. Electronic panels buzz. Monsters grunt and snuffle a warning if you're near. And when you fire a burst from your MiniGun, you'll hear the tinkle of spent cartridges hitting the ground.

The story begins when you wake up in a cell on the Vortex Rikers, a prison spaceship bound for some distant penal colony. But the Vortex Rikers has crashed. Not only is your



IF LOOKS COULD KILL, you would be dead. This imposing Skaarj is as tough as he looks.



SEE THOSE BLADES? This Skaarj is already too close for comfort.



THIS IS THE LAST THING you'll ever see.



ALONG WITH ITS BEAUTIFUL LIGHTING EFFECTS, Voodoo2-enabled Unreal can create complex transparencies like the water in this pool.

Unreal Tips So You Can Rip

Run if all else fails. When you run into one of the huge bad guys spoiling for a fight, don't stand toe to toe and blast away. You'll take too many hits. Run and strafe. If your health points are low or you don't have the right weapon in hand, run for cover. Don't fight on ledges, either. A hit from an enemy weapon can knock you off into a lava pit, and you'll die a fiery death, no matter how many health points you have.

Be prepared for unlit tunnels. They're deadly. There's one chilling moment near the force-field areas when all the lights shut down one by one, leaving you in total darkness. Moments later, a Skaarj attacks. Use a flare if you hope to survive. In the darkness, he'll eat you alive.

Frag different. The default viewpoint is first person, but if you press the tilde key (~), type *Behindview 1*, then press Return, Unreal gives you a third-person perspective. To return to the first person, do the same but type the phrase *Behindview 0* instead.

Befriend the Nali. When you meet your first Nali, you'll want to blast him away. Don't. The nasty Skaarj have enslaved the indigenous Nali. If you don't kill them, they lead you to all sorts of secret rooms, useful weapons, and other hidden goodies.



A SLITH GUARDS HIS TERRITORY FIERCELY, and will chase you down on land or in water.



THE AGILE SLITH CAN SWIM better than you, so hiding in water does no good.



THE SLITH IS UPON YOU. To see better in this watery environment, light a flare as we did here, then run for your life.

cell door open, but everyone seems to be dead or dying—prisoners, guards, crew. Bloody bodies litter the decks. You begin to explore, looking for a way out. A drone PA system sputters to life, announcing that a prisoner is escaping, but no one responds.

Play is gentle enough at first. You have no weapons to defend yourself, but no one comes after you. As you make your way through the early levels, you find health units, weapons, and ammunition. Grab them all! You'll also find a translator device that helps you understand messages, flares and flashlights for seeing in the dark, various suits of body armor, and a few special items for combat. None of these last forever, so use them wisely.

Once you leave the wreckage of the penal ship, you walk into a dangerous alien world of towering mountains, underground Tarydium mines, waterfalls, ceremonial ruins, abandoned villages, glowing crystals, lava flows, bluffs and canyons, a medieval Nali castle, and even another spaceship. Each new level is as impressive as the last, gorgeous to look at but extremely hazardous. Unreal contains 40 intricately designed locations to keep you on your toes, plus an array of flora and fauna unlike any you've ever seen. Most of the fauna is eager to rip you apart or blow you into tiny pieces.

As beautiful as the world of Unreal may be, you're looking for a way to escape it. You meet the cunning Skaarj, conquerors of this wayward planet. You battle the slow but aggressive Brutes, Skaarj-engineered killer grunts. You encounter the acid-spitting Slith and dangling Tentacles, dangerous on both land and water. Mercenaries and Kralls, whom the Skaarj use as hunters, pummel you. And if you live long enough, you'll eventually come up against the Titans, huge boulder-tossing creatures that tower 30 feet above you and weigh as much as 15 tons.

You can play the game as a male or female prisoner. You also have a choice of four skill levels, ranging from Tourist to Death Wish. Don't be embarrassed if you try the easiest to start. This game is tough, and the artificial intelligence is keen—all the creatures dodge, hide, and sidestep, making it difficult to draw their blood. If you need practice, try the death matches. In addition to the 40 game levels, 11 death match maps throw you up against a frenzy of killer bots. The death matches, reminiscent of Marathon, are exceedingly difficult but pure fun. Just don't spend too much time admiring the scenery.—*John Lee and Jennifer Ho*



GOOD NEWS: Stunning graphics and sound effects. Stimulating gameplay. Impressive array of indoor and outdoor levels. Solid single-player experience. BAD NEWS: RAM requirements are unreal. You must use virtual memory.

in review

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reviews

PowerBook G3 Series 292

HARDWARE

COMPANY: Apple Computer
CONTACT: 800-795-1000 or 408-996-1010, http://www.apple.com
PRICE: $5,599 (SRP)
SPECIFICATIONS: 292MHz G3 with 1MB of backside cache, 64MB of RAM, 8GB IDE hard drive, 20X CD-ROM, built-in 10BaseT Ethernet, 14.1-inch active-matrix display, 4MB of VRAM, K56flex modem



Photo by Aaron Lauer

THE HIGH-END POWERBOOK G3 SERIES 292 is an amazing Mac—if you have the money to buy it. The display is like nothing else, and the speed—well, let's just say that the Montana state police are *very* interested in talking to us.

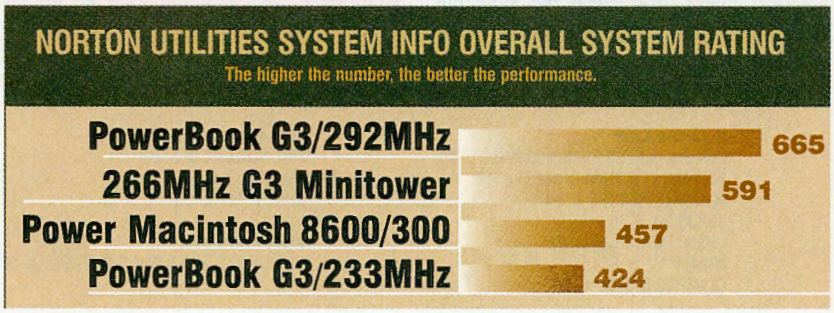
What a difference a display makes—that, and some extra megahertz and backside cache. Last month, we reviewed the low end of the PowerBook G3 Series (see Sept/98, p46)—you know, the one with the small passive-matrix display and slow (relatively speaking) processor. This month, it's the highest of high-end portability—the PowerBook G3 Series 292. Sporting a crystal-clear 14-inch display and a 292MHz G3 processor with 1MB of backside cache, this ruler of all 'Books is just that—the best you can buy. Of course, you pay for what you get; all that power under the hood and the huge window on your Mac's world costs twice as much as the low-end model.

This PowerBook's display is gorgeous—evenly lit, colorful, and big. So naturally, we decided to torture-test the unit on the deck in the backyard during a sunny summer afternoon. Although the display is huge, crisp, and clear, it can't quite cut through mid-afternoon glare in July—at least if you have sunglasses on. Take the glasses off, and the display, while a bit hard to read, works satisfactorily in the brightest light. We also found out that the PowerBook's shell is tough enough to withstand the banana-lawn-chair impact test without cosmetic damage—a relief, given that our review unit is on loan from Apple and needs to be sent back at *some* point. Battery life is true to Apple's ratings—about three and one-half hours on a single battery—unless you crank up the screen brightness while defragmenting the hard drive and playing an audio CD—in which case, expect that battery time to drop.

A pinnacle of portability, the high-end PowerBook G3 outperforms just about any desktop unit out there. We ran our standard Norton benchmarking suite and were surprised by the PowerBook's speed—only the 300MHz G3 tower can beat it. Just think—a laptop that can go head-to-head with the fastest PCs out there. After a few weeks of using this speed demon, I found it difficult to go back to a slower 9600/233.

We also liked the feel of the keyboard. Besides the annoyingly rearranged Option key and keyboard nubbins, the keyboard is responsive and quiet—a great feeling under the fingers of a touch typist. The G3 Series includes a Control Strip module that governs the peripheral bays. It tells you not only what device is in each bay, but whether or not you can freely swap that peripheral—very cool. A selection in that module then lets you prepare the device for removal. The battery has a series of LEDs that tell you at a glance how much battery power remains—even when the 'Book is asleep. The embedded keypad comes in handy for those of us who actually use the Insert and Delete keys. The modem is conveniently located under its own itty-bitty door, which folds back garage door–style into the case to provide easy, snag-free access. It's too bad Apple didn't make the other ports (especially the Ethernet port) the same way.

Overall, the high-end PowerBook G3 Series is the greatest laptop ever. It sports some annoying features shared across the product line, such as the noisy CD-ROM drive and the Caps Lock LED, which you can't see past a certain angle—for example, when you have the 'Book on your lap. The active-matrix display addresses our major concern with the low-end 'Book's poor-quality passive-matrix display—after all, if you can't stand to look at your Mac's monitor, it isn't much use. The high-end 'Book we received even shipped with a different safety label on the battery that—unlike the low-end 'Book's safety label—didn't leave a veneer of adhesive on every surface it touched. Nice work, Apple. We carry this PowerBook with pride.—*David Reynolds*





GOOD NEWS: Amazingly fast. Bright, clear, huge display with even color. Great keyboard, enclosure, and overall looks. Solid construction. Nifty hot-swappable expansion bays with great software integration. Turns heads on airplanes.
BAD NEWS: Costly—but what do you expect for the top of the line? Video-out port provides only video mirroring. Wide case a little uncomfortable to use on coach-class airplane trips.

You've Eliminated the English. Buried the Babylonians. Crushed the Celts. Who's Next?



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CIVILIZE YOUR FRIENDS

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Buffalo 14.1-Inch PowerPanel

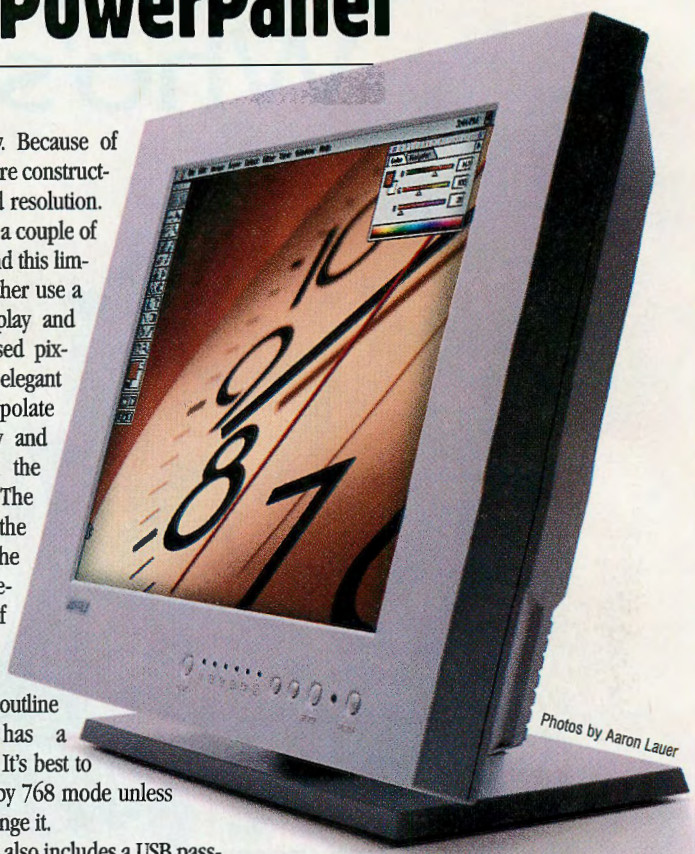
HARDWARE

COMPANY: TechWorks
CONTACT: 800-753-8360 or 512-794-8533, http://www.techworks.com
PRICE: $999 (street)
SPECIFICATIONS: 1024 by 768 resolution

The Buffalo 14.1-inch PowerPanel LCD monitor has a hard act to follow in the Apple Studio Display—the pinnacle of flat panels (see Reviews, Sept/98, p44). But it costs about half as much, a great point for those of us who can't justify spending $2,000 on a monitor—even one as beautiful as the Studio Display. For half the cash, the PowerPanel delivers sharp images at up to 1024 by 768 resolution. The monitor's viewing angle (15 degrees top, 30 degrees bottom, and 50 degrees from side to side) is a little narrow, but since it probably won't be moving much from its desktop perch, this isn't too much of a problem.

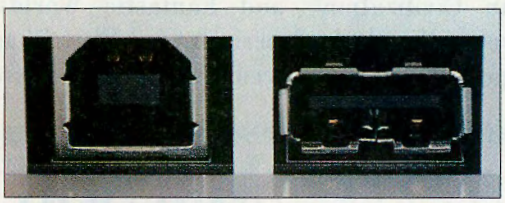
One odd—and at first maddening—problem is the lack of a contrast control. Sure, you can change the PowerPanel's brightness, but its fixed contrast results in somewhat washed-out colors, especially in the low- and mid-tone ranges. To solve this problem, we installed Photoshop 5.0, which includes a gamma control panel. When we used this control panel to tweak the monitor's contrast, its picture became vivid and bright, with deep, rich colors at the low end. We're not suggesting that everyone go out and buy Photoshop just for the program's gamma control panel (although Adobe probably wouldn't mind); any control panel that allows you to adjust gamma should do the trick. The PowerPanel's other monitor controls (such as moiré control and positioning) are located right up front and easy to use.

The PowerPanel isn't limited to 1024 by 768 resolution; it's capable of lower resolutions such as 640 by 480 as well, but the results aren't pretty. Because of how LCD monitors are constructed, they have a fixed resolution. There are, however, a couple of hacks that get around this limitation: LCDs can either use a portion of the display and blank out the unused pixels—not exactly an elegant solution—or interpolate the smaller display and blow it up to fill the entire screen. The PowerPanel uses the second method. The results look somewhat like a page of text written in a bitmap font for which there is no outline font—everything has a jagged appearance. It's best to stay with the 1024 by 768 mode unless it's necessary to change it.

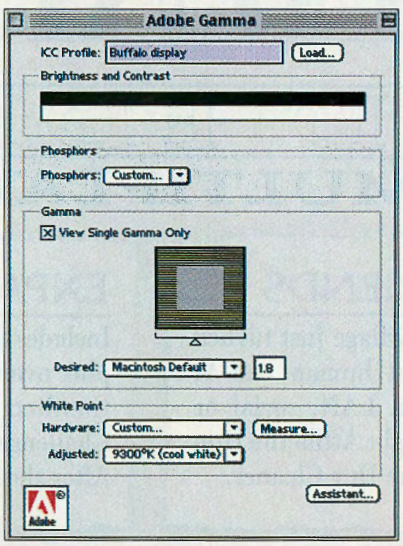


Photos by Aaron Lauer

The PowerPanel also includes a USB pass-through port, which is great for the future (especially after we've seen the slew of USB devices ready to hit the market). At the time of this review, however, this feature is difficult to evaluate, as no officially supported USB devices are available yet for us to test. This will change in the very near future, and when it does, having USB built into the monitor will be a great perk.



USB IS COMING, and with the PowerPanel's built-in USB pass-through port, you'll be ready.



ALTHOUGH IT'S PART of Photoshop 5.0 (which you probably wouldn't buy just for its control panel), Adobe Gamma makes the PowerPanel look great!

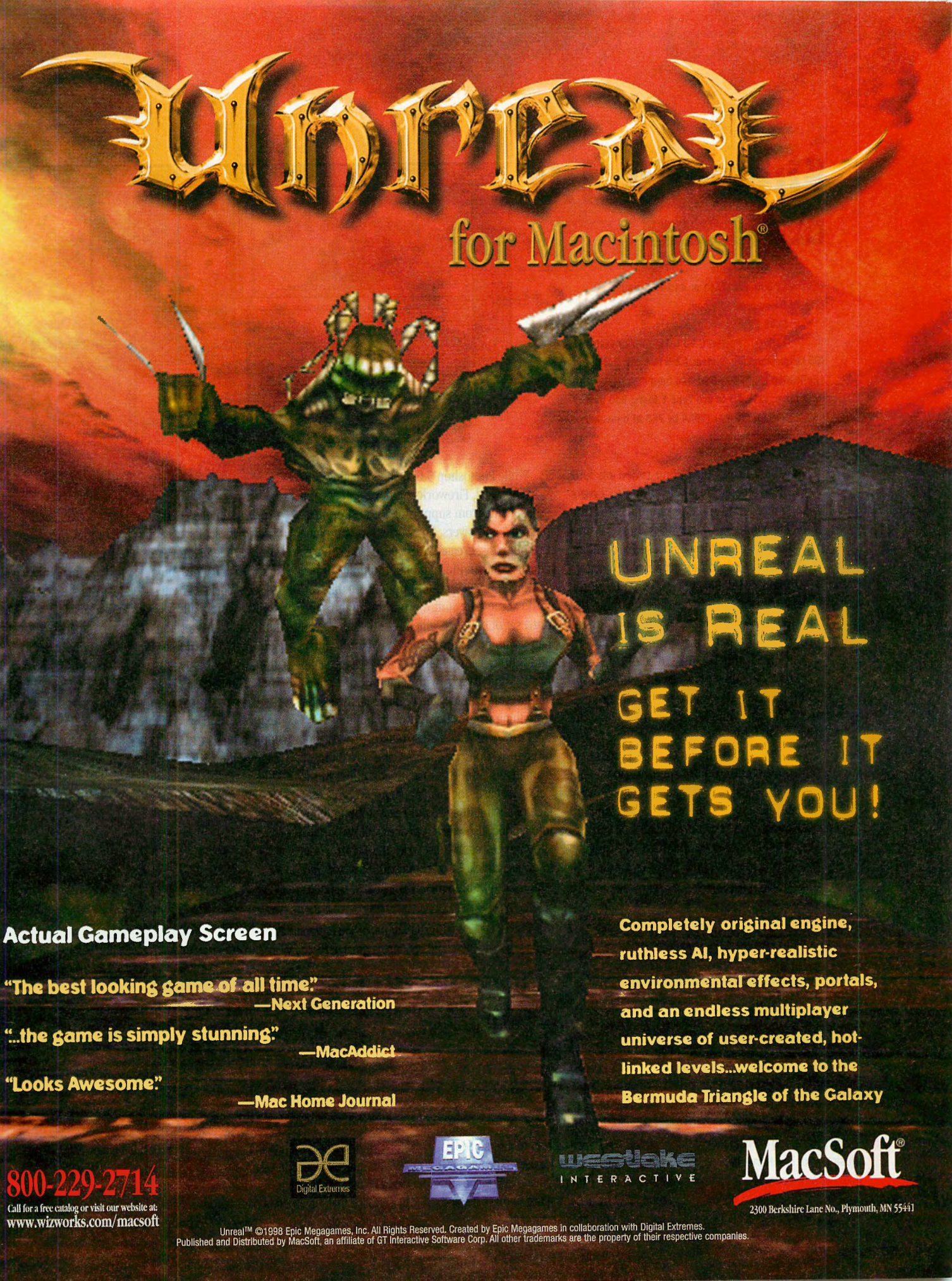
LCD FOR UNDER $1,000?
Get out—that's unbelievable!

For $999, the Buffalo monitor is a great buy. It replaces the bulky AppleVision 1705 display that used to suck up most of the real estate on my desk, and it weighs about 30 pounds less. The picture is bright and crisp, and the setup is a no-brainer—no drivers needed. If you're looking for a flat-panel display and can't afford the admittedly more stylish Apple Studio Display (which is, after all, to drool for), then check out the Buffalo 14.1-inch PowerPanel. At half the price, it won't disappoint you.—*David Reynolds*

GOOD NEWS: Great display quality. Built-in USB port. Screen size is equivalent to a standard 15-inch monitor's. Multiple resolutions. Light and compact. **BAD NEWS:** Uninspiring industrial design. Somewhat narrow viewing angle. Sparse documentation.

Unreal

for Macintosh®



UNREAL IS REAL

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—Next Generation

"...the game is simply stunning."
—MacAddict

"Looks Awesome."
—Mac Home Journal

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reviews

Fireworks 1.0

DESIGN & GRAPHICS

COMPANY: Macromedia
CONTACT: 800-470-7211 or 415-863-4409, http://www.macromedia.com
PRICE: $299 (SRP)
REQUIREMENTS: PowerPC 603, 180MHz or faster (G3 recommended); System 7.5.5 or later; 24MB of application RAM; 60MB of free hard disk space; CD-ROM drive; ATM 4.0 to use Type 1 fonts; 640 by 480, 256-color monitor (1024 by 768 at thousands of colors recommended)



YOU'LL NEED A LOT OF SCREEN SPACE to run Fireworks. Look at all those palettes!

Graphic artists have long relied on four or five separate applications to create small, good-looking graphics for the Web. Macromedia's Fireworks aims to simplify the image-creation process by combining several tools into one graphics program.

On launching Fireworks, you encounter a plethora of palettes—enough to take the phrase *cluttered screen* to new levels. Palettes include Brushes And Fills, Layers And Frames, and so on; you can't reorganize or regroup them as in Photoshop. Other palettes allow you to specify shapes and URLs for image maps or to set an object's opacity.

Fireworks uses Bézier curves (paths)—a concept foreign to Photoshop experts—to control images and objects created with brushes, text, and other tools. Drawing in paths takes practice, but the results can be extraordinary. Imagine painting a squiggly line, then editing the path and the brush pattern; adding a drop shadow, then reediting it.

While Photoshop 5.0 pushed imaging software forward, Fireworks outdoes it in several areas. Aside from supporting Photoshop files, plug-ins, and layers, Fireworks lets you place text on paths, create JavaScript-based rollover effects, and undo actions multiple times. Advanced image and tool options enable you to do some nifty stuff. Beyond using the standard set of bevels, gradients, and shapes, you can combine textures such as Vein, Scratch, and Smoky with patterns such as Aggregate, Bricks, and Tweed. With enough experimentation, you can create realistic textures on everything from water to toys to buildings.

Fireworks facilitates batch processing, though it doesn't support the creation of droplets as Adobe's ImageReady does. But it definitely eases the struggle many Webmasters face of slicing images and reassembling them into a table. Its two-step process allows you to slice images easily and write the HTML code to create tables. In working with files, we had some disappointments: Using Fireworks to create animated GIFs is a bit of a pain, and Fireworks lacks tweening tracks—you can't apply a fade or move text along a path in a set number of frames, but must do it all manually.

Fireworks' greatest feature is its export ability, which allows you to preview up to four different versions of your image. This side-by-side comparison and optimization alone is probably worth $299 to those who spend their days creating Web graphics.

Fireworks' export preview, patterns and textures, and reeditable paths make this application worthy of serious consideration for amateur and professional Web artists alike.—*Erik J. Barzeski*



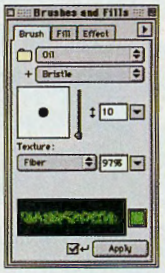
GOOD NEWS: Great four-pane export option. Can create JavaScript rollovers and image maps. Can apply and combine a variety of effects. Uses Photoshop plug-ins. **BAD NEWS:** Confusing interface.

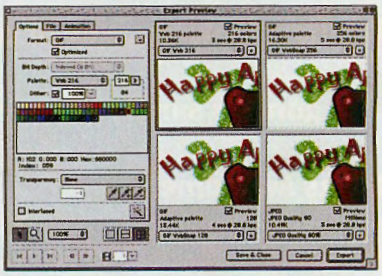
How to Liven Up an Apple

Creating or importing a graphic is a snap with Fireworks. Here's how to dress up and optimize a graphic for the Web.









1 Begin by opening a Photoshop, Illustrator, or FreeHand file. Alternatively, open files formatted as GIFs, JPEGs, or PNGs. Here we've selected an Illustrator EPS graphic.

2 This apple is kind of dull, so add a pair of ovals for eyes. Then add text on a path (another oval). Place a drop shadow under the text to make it stand out more from the background.

3 Add a little flash to the graphic using an Oil brush combined with a Fiber texture. Notice that the brush, a path, remains editable.

4 Export the image as a GIF or a JPEG. Use the Export dialog box to compare file types and settings (such as GIF with 216 colors and JPEG at 80 percent).



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reviews

Poser 3

DESIGN & GRAPHICS

COMPANY: MetaCreations
CONTACT: 805-566-6200, http://www.metacreations.com
PRICE: $299 (SRP), $99 upgrade
REQUIREMENTS: PowerPC 603 or faster (G3 recommended), System 7.6.1 or later, 20MB of application RAM (64MB recommended), 80MB of free hard disk space

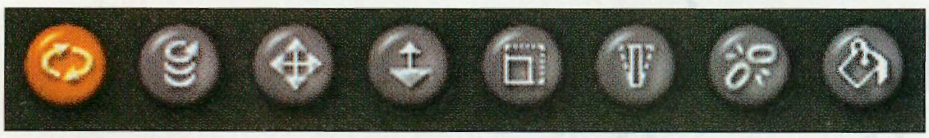


THE BRAND-NEW POSER INTERFACE contains all the tools you need to pose and animate human figures.

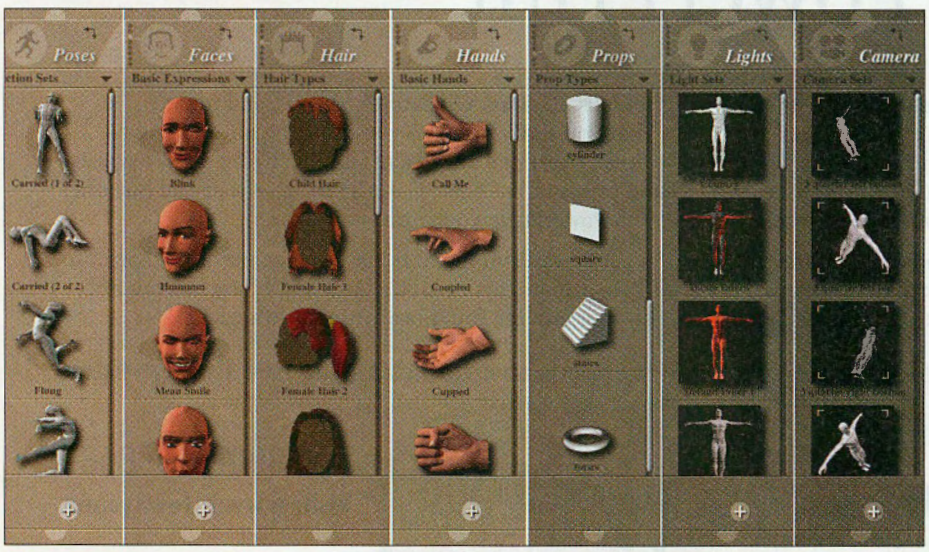
The munchkins and techno elves at MetaCreations have been hard at work on Poser, the company's 3D virtual mannequin program. Whereas versions 1 and 2 were cool curiosities, Poser 3, with its all-new interface, slicker models, and innovative animation abilities, is a truly useful tool for animators, artists, architects, photographers, and choreographers. Poser 3 has so many new features we can't cover them all here, but part of the fun of playing with any MetaCreations application is discovering for yourself what it can do.

Poser 3, like its predecessors, helps you do one basic job: pose and animate 3D human figures (and now a few animals as well). The program comes with a set of seamless low-, medium-, and high-resolution models you can manipulate by pulling on the head, trunk, and limbs, as if you were posing jointed dolls. You can constrain each model with an inverse kinematics, or IK, chain so joints move and rotate realistically (that is, not farther than they would in a real body).

Once you've got the pose right, you can add a backdrop, textures, props, and lighting. (Only three lights are available, which rules out sophisticated theatrical or cinematic lighting.) A keyframe system controlled by a timeline allows you to move your models. Drag a model through various poses, setting a keyframe for each major pose, and the program figures out the transitions. When rendering, Poser 3 outputs phong-quality still images and movies with shadow mapping and antialiasing.



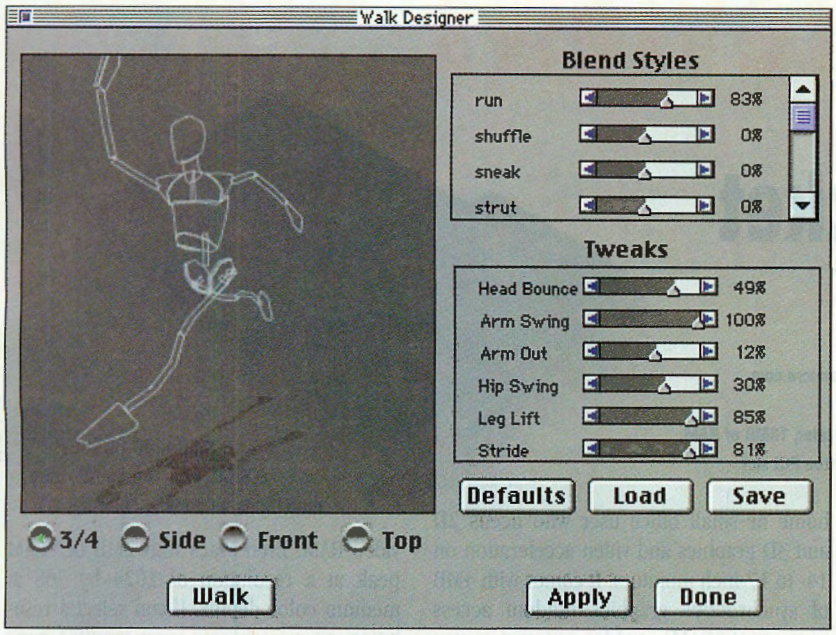
THESE ARE POSER'S figure manipulation and IK tools.



POSER 3 SHIPS WITH EXTENSIVE LIBRARIES of figures, poses, props, lights, and cameras. You can add to the libraries from within the program or import 3D objects from other programs.

If you've used previous Poser versions, you'll welcome its major interface improvements. A complete overhaul to the workspace makes it look more like MetaCreations' Bryce 3D. Poser 3 takes up the whole screen with self-docking nonmodal floaters. At center, the Document window shows your working image in any of nine viewing modes (from wireframe to fully textured and shaded). Screen redraw even at the medium-detail viewing modes was fast on our 266MHz G3. At the screen's left are Bryce-style navigation and camera controls. Along the top you'll find IK and other animation controls, and sliders at right help you set the exact positions of each joint and control smaller attributes such as facial muscles. At the far right, the Libraries palette provides access to the expanded collections of models, readymade poses, props, and lighting sets.

Another impressive feature in Poser 3 is the new higher-resolution models. These male, female, and child figures are anatomically much more detailed and yield much better-looking output, although it takes longer to render them. You can distort or caricature the models by making parts larger or smaller; you can also outfit them with clothes and customizable hairdos. Horse, dog, cat, dinosaur, and dolphin models have been added as well, each with its own customization options.



WALK GENERATORS ARE THE LATEST RAGE in character animation. Poser's Walk Designer has more controls than most, but its algorithmic movements lack a certain individuality.

However, there's a limit to how much you can customize Poser models. This has always been one of its weaknesses. You can substitute imported 3D objects for parts of a figure—a Minotaur's head, say, or a Gatling gun for a forearm—but you can't apply Poser's IK chains to entirely new models imported from other 3D applications. Nor can you develop new Poser IK chains for snakes, bugs, robots, and other legless or multilegged critters. Actually, you can substitute new objects for every part of a Poser figure, but what you get is a kind of shish kebab effect without smooth-skinned joints. Or you can edit the Poser figure text file in an ASCII editor.

Poser 3's beefed-up character animation tools are way ahead of anything you'll see in most other 3D programs, with the possible exception of Hash's Animation: Master 98. The high-resolution models now include fully articulated, 18-jointed hands that you can pose using sliders. These are easy to master and work very well for basic gripping movements. However, not every finger has a slider, which limits the degree of hand expressiveness you can achieve with this method; eventually you have to manipulate individual fingers using standard IK. Sliders also control morph targets in the eyes, brow ridge, cheeks, and mouth. These are easy to use and can generate broad facial expressions—surprise, anger, or joy. Subtle expressions are more difficult to achieve, but not impossible.

Need lip-synching features for your Poser figures? Poser 3 adds an audio track (in the Animation palette) so you can hear the sound. You can see its waveform in the Graph palette and adjust jaw muscle keyframes to match spikes in the wave. This technique works well for quick talking motions. For more accurate lip-synching, you can apply a library of mouth shapes, based on phonemes, to the mouth of the character.

Getting a 3D figure to walk is sometimes harder than getting it to talk; you've got to understand the mechanics of leg and hip movement and center of gravity, and know how to keep the feet from sliding across the floor or dipping below the floor surface. Poser 3's Walk Designer eliminates some of the problems but introduces others. It applies a basic walk cycle to any figure and provides sliders for modifying stride length, hip swing, head bounce, gait, speed, and age. By choosing a walk path, you can make the figure walk any distance on a flat surface. Unfortunately, the possible walks tend to vary between android and (when the sliders are pushed a little too far) frenetic and unrecognizable. A Mickey Mouse–style double-bounce walk is totally out of the question. Since there's no way to attach a keyframe-animated walk to a walk path, you'll still need to animate many walks entirely by hand.

Nonetheless, Poser 3 has come a long, long way toward making figure posing and animation easy. If you need humans and you need them *quick*, Poser 3 is a marvelous solution.—*Steve Anzovin and Raf Anzovin*



GOOD NEWS: Revamped interface. Improved IK and morphing. Advanced animation features. Walk generator. Higher-resolution models. Animal models. **BAD NEWS:** You can't make your own models easily. Bending joints too far causes tearing. Generated walks lack individuality. Only three lights.

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ix3D Mac Rocket

HARDWARE

COMPANY: IXMicro
CONTACT: 888-467-8282 or 408-369-8282, http://www.ixmicro.com
PRICE: $220 (SRP)
REQUIREMENTS: PCI-based Power Mac, System 7.6.1 or later, 16MB of RAM, QuickTime 2.5 or later, QuickDraw 3D 1.5.1 or later, one free PCI slot



Photo by Aaron Lauer

IX3D MAC ROCKET ZOOMS PAST on-board video limitations with flying color depths.

Last year computer industry watchers proclaimed 1998 the year of the graphics accelerator, and the proliferation of video cards on the market has indeed confirmed that prediction. We've witnessed the popularization of rarefied tools that formerly only professionals could afford. Among the entry-level graphics accelerators aimed at the consumer market is IXMicro's new offering for home and office users, ix3D Mac Rocket.

Mac Rocket, like its high-end siblings ix3D Pro Rez and Ultimate Rez, is built around IXMicro's 128-bit graphics chip, TwinTurbo 128-3D. Mac Rocket suits the home or small office user who needs 2D and 3D graphics and video acceleration on 14- to 17-inch monitors. It comes with 4MB of synchronous graphics random access memory (SGRAM), a video-out port so you can attach your Mac to a TV or VCR, and a useful software bundle, including Kai's Photo Soap, Sonnetech's Colorific, Microspot's 3D World Demo, Intervista's WorldView, Alien Skin's Eye Candy, Totally Hip Software's WebPainter SE, and Adrenalin's Charts SE.



THE IXVIEW CONTROL PANEL allows fine-tuning of acceleration. You can toggle acceleration on and off.

Installing Mac Rocket was easy. We took it out of its antistatic sleeve, carefully put it into an open PCI slot, attached a 15-inch multisync monitor to the card's monitor port, and installed the software drivers. The entire procedure took 10 minutes. After setup and the usual monitor adjustments, you can install the various bundled applications from the CD-ROM volumes 2 and 3. The well-designed online user's guide, located on volume 1, efficiently explains Mac Rocket's controls, as well as graphics and video terminology.

Mac Rocket supports a maximum resolution of 1280 by 1024 in thousands of colors up to an 85Hz refresh rate, which provides a crisp, clear display and more detail than you're used to, especially if you own an older Power Mac with only 1MB of on-board video RAM. Even Macs with 2MB of VRAM peak at a resolution of 1024 by 768 at medium color depths. If you select a resolution or refresh rate your monitor can't handle, you could irrevocably damage the display. Luckily, Mac Rocket has a safety feature that keeps the screen black in the case of a too-ambitious resolution and returns the display to its previous setting.

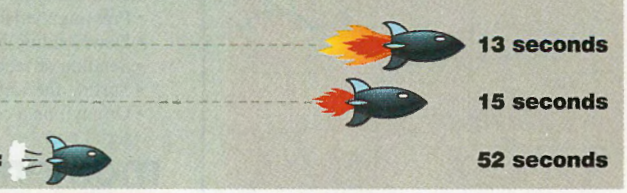
In our performance tests, Mac Rocket ran like a world-class sprinter. Like its heftier teammate, which we recently reviewed (see Ultimate Rez, Sept/98, p50), Mac Rocket excelled in 2D acceleration, which made scrolling through text documents a breeze. It also zipped through Web pages loaded with graphics. As for QuickTime acceleration, Mac Rocket cranks out frame rates at a video's given amount across resolutions. For example, we watched Apple's 1984 commercial, which contains 24 fps, at various sizes onscreen, and Mac Rocket never dropped a frame, according to Movie Player's frame rate counter.

3D acceleration was good, but the card and drivers weren't intended to accelerate polygon-intensive 3D games. If you want slick 3D acceleration exclusively for RAVE- or Glide-enabled games such as Unreal, you should choose a Voodoo-based accelerator, which supports both APIs. However, the 3D acceleration we achieved in graphics-rendering applications such as 3D World was on par with that of a Rage Pro–endowed board. If you want to play 2D games, Mac Rocket allows you to shoot 'em up at high resolutions and color depths. In sum, ix3D Mac Rocket is a powerful pixelerator for consumers.—*Jennifer Ho*

ARE YOU A SCROLLOHOLIC?

We tested ix3D Mac Rocket on a consumer Mac system to see if it would satisfy our need for speedy scrolling. Test configuration: Power Macintosh 6500/225, 64MB of RAM, System 8.1, QuickDraw 1.5.4, monitor set to thousands of colors at 800 by 600, 85Hz.

Time to Scroll an 80-Page Claris Document
(elapsed time)



GOOD NEWS: Installation is easy as pie. Superb 2D acceleration. Great hardware pan and zoom for serious pixel editing. Very nice software bundle.
BAD NEWS: Memory is not upgradable.

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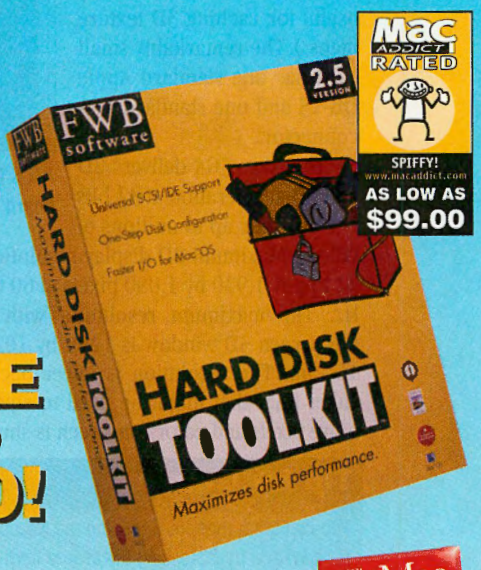
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Nexus GA

HARDWARE

COMPANY: ATI Technologies
CONTACT: 905-882-2600, http://www.atitech.com
PRICE: $499 (SRP)
REQUIREMENTS: PCI-based Power Mac, System 7.5.5 or later, 16MB of RAM, QuickDraw 3D 1.5.1 or later, high-resolution large-screen color monitor recommended

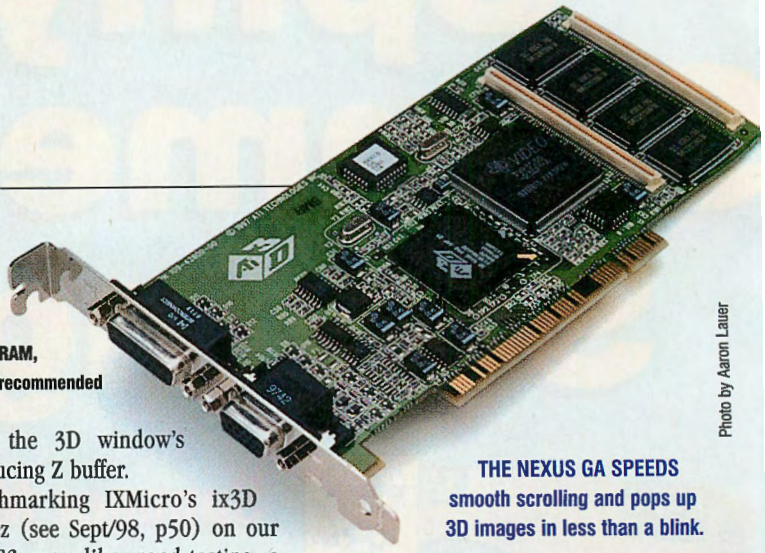


Photo by Aaron Lauer

THE NEXUS GA SPEEDS smooth scrolling and pops up 3D images in less than a blink.

As the average cost of big monitors comes tumbling down, so do the prices for ultrahigh-resolution graphics cards capable of driving huge CRTs at their highest-rated resolutions and refresh rates. Of the handful of PCI cards that deliver maximum imaging, ATI's Nexus GA is a stellar contender, with only one notable shortcoming—no QuickTime acceleration.

Driving the Nexus GA board is ATI's well-proven 64-bit Rage Pro chip. A fast external digital-analog converter bumps the Rage Pro up to 128-bit power. The card comes with 8MB of window RAM (WRAM), but if that's not enough you can upgrade to 16MB using a WRAM memory module. (More WRAM won't net you more pixels onscreen, however; it's only useful for caching 3D texture maps.) The remarkably small card has one standard Apple DB-15 and one standard VGA connector.

The Nexus GA delivers 2D and 3D acceleration at 32 bits per pixel, or up to millions of colors. Maximum 2D display resolution at 32 bpp is 1,920 by 1,080 pixels at 60 to 72 Hz. The maximum resolution with one full-screen 3D window is 1280 by 1024 at 16 bpp. The resolution is lower because video RAM that might be used to squeeze more pixels and colors onscreen is shunted instead to the 3D window's depth-producing Z buffer.

If benchmarking IXMicro's ix3D Ultimate Rez (see Sept/98, p50) on our 266-MHz G3 was like road-testing a touchy mid-'80s Jaguar XK, taking the Nexus GA for a spin was like slipping behind the wheel of a Porsche Boxer—a smooth, well-engineered experience in speed. Scrolling a 95MB, tabloid-size, 300-dpi Photoshop image was effortlessly smooth, without the quirky artifacts the ix3D board exhibited. In our favorite direct-draw-to-screen test, the Nexus GA blasted out 52 frames per second of a Commotion 1.5 D1 video window, just under the ix3D's record 54 fps.

The Nexus GA's 3D performance is also extremely fast. The board supports QuickDraw 3D RAVE, but not OpenGL or 3Dfx Glide. ATI claims the Nexus GA is capable of spitting out up to 1.2 million triangular polygons per second while drawing 3D textures at a maximum 45 million pixels per second. You won't see that level of performance in any real-world situation, but we did find that the Nexus GA board was quite a bit faster than the ix3D Ultimate Rez—at a price. Nexus GA popped our Inspire 3D test scene (100,000 polygons and 38MB of texture maps, 7-second unaccelerated redraw with no textures displayed) onto the screen in exactly 1 second with textures and shadows displayed—a screaming three times faster than the ix3D Ultimate Rez. However, the ix3D Ultimate Rez rendered textures at a higher resolution, and they looked smoother, which explains the speed difference. Other 3D quirks? The Nexus GA couldn't handle transparencies (the ix3D Ultimate Rez couldn't, either) and tended to give a greenish or reddish cast to some colors.



ATI'S DISPLAYS CONTROL PANEL provides useful information about the board's ongoing allocation of WRAM.

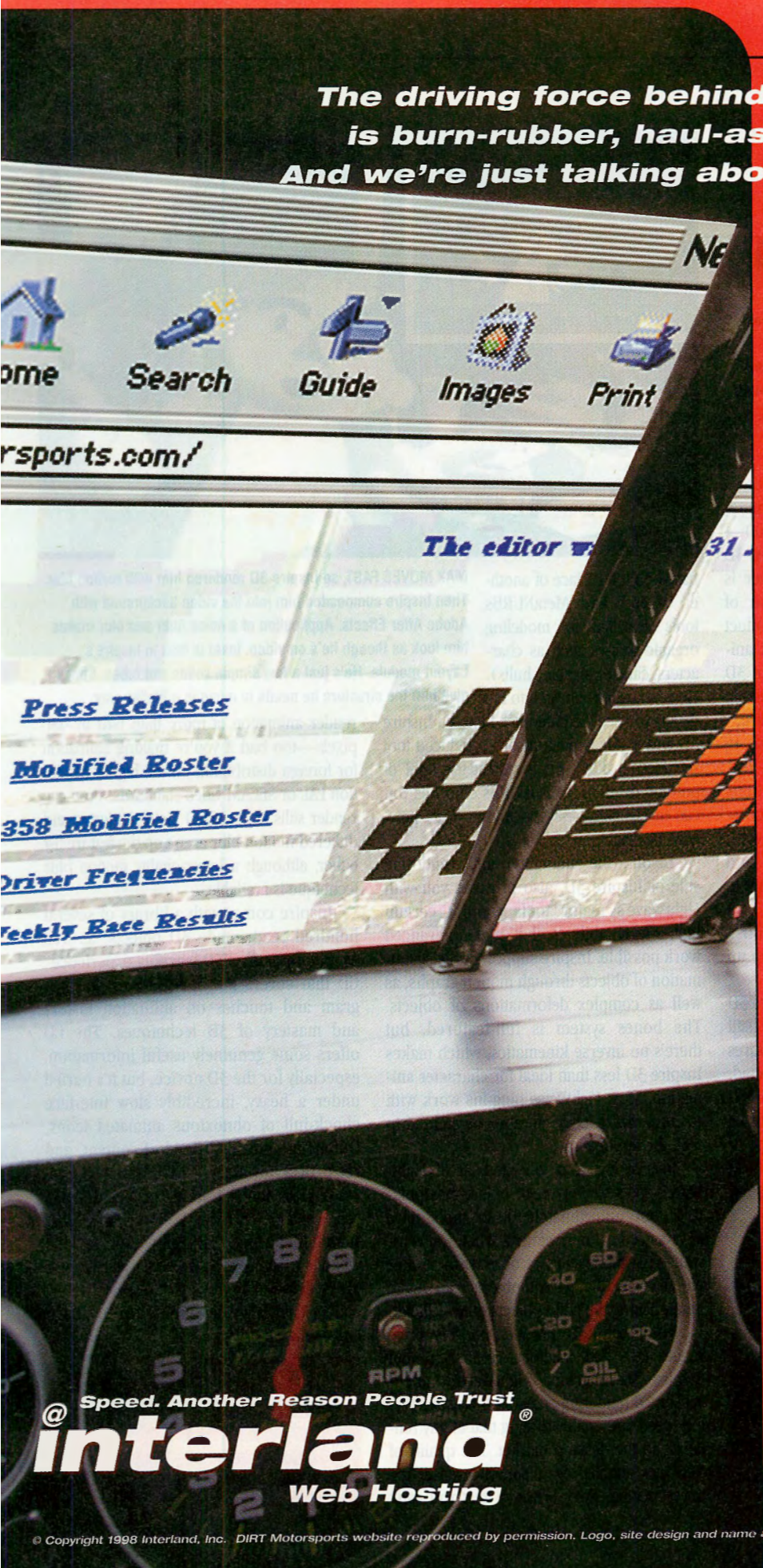
Our test drive did uncover one disappointment: The Nexus GA doesn't do QuickTime acceleration. With ATI's own lower-cost Xclaim VR and Xclaim 3D boards able to run full-screen Cinepak movies at 30 fps, it's a shame that the company's top-of-the-line card can't do at least the same.

For the same price as its closest competitor, the Nexus GA is just as fast, fits more Macs, and is more expandable. It's a solid buy.—*Steve Anzovin*

GOOD NEWS: Excellent video and 3D performance. Expandable RAM.
BAD NEWS: Low-resolution textures. No QuickTime acceleration.

Tip for Gamers

You can cram more textures into the Nexus GA's WRAM by increasing the texture compression setting in the ATI Displays control panel. The only downside is that compressing textures degrades image quality.



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Inspire 3D

DESIGN & GRAPHICS

COMPANY: NewTek
CONTACT: 210-370-8000, http://www.newtek.com
PRICE: $495 (SRP)
REQUIREMENTS: PowerPC (Power Mac G3 recommended), System 7.6 or later, 16MB of RAM (64MB of RAM or more recommended), CD-ROM drive, QuickDraw 3D 1.5 or later



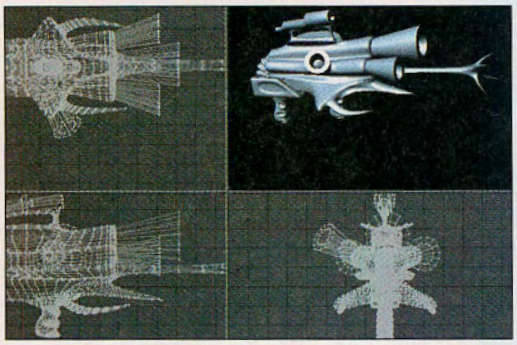
MAX MOVES FAST, so Inspire 3D rendered him with motion blur. Then Inspire composited him into the video background with Adobe After Effects. Application of a noise filter and blur makes him look as though he's on video. Inset is Max in Inspire's Layout module. He's just a few simple solids and tubes. Bones give him the structure he needs to move in a lifelike way.

FIND MAX in *Escape from MacAddict* on The Disc.

Newtek's LightWave 3D has long been a popular choice for serious 3D animation, but its high price—$1,900—puts it out of reach for most aspiring 3D artists. The company's low-cost answer is Inspire 3D, a stripped-down version of LightWave aimed at industrial and product designers, illustrators, and entry-level animators. At $495, Inspire offers a lot of 3D bang for the buck, especially for someone looking for an upgrade path to LightWave.

Inspire 3D's interface is similar to LightWave's—that is, it's very un-Mac-like. It doesn't follow most Mac conventions and shortcuts, but its two-part interface—one module for modeling, one for layout, animation, and rendering—is fast and logical once you get the feel of its simple square-button design. And as in LightWave, you control everything with a set of quasi-modal panels you can pop up and down as needed.

Naturally, NewTek has hobbled Inspire 3D to justify the $495 price, but Inspire still sports a surprising number of the features that make LightWave so well respected. Inspire's Modeler retains LightWave's precision modeling tools, which include accurate Boolean operations (scoop out, slice up, or stencil polygons onto the surface of an object based on the surface of another object) and MetaNURBs tools (excellent for modeling organic shapes such as characters, cars, or airplane hulls). However, when you get into the details you see the difference between Inspire 3D and its big sibling; Inspire's reduced tool set doesn't allow you to adjust the level of polygon detail in a MetaNURBs object as you can in LightWave—it's locked at three polygons per patch.



INSPIRE 3D'S POWERFUL MODELER is based on the highly regarded modeler in LightWave 3D.

Layout, the animation and rendering side of Inspire 3D, also provides you with LightWave's major tools without certain higher-level abilities that make advanced work possible. Inspire supports precise animation of objects through motion graphs, as well as complex deformations of objects. The bones system is full-featured, but there's no inverse kinematics, which makes Inspire 3D less than ideal for character animation. Most LightWave plug-ins work with Inspire, and a large number of them ship with the application.

Inspire has also inherited all of LightWave's tools for onscreen object manipulation, but unfortunately these tools have always needed improvement. When you work with large hierarchies of objects, for example, rotating the parent objects can make manipulating the child objects quite difficult.

Historically, 3D products in this price range have had mediocre renderers, but Inspire 3D—packing LightWave's much-acclaimed rendering engine—boasts rendering speed and quality rivaling that of any renderer on the desktop market. The quality of NewTek's antialiasing is superb even at the lowest setting. Note, however, that you can't render animation at more than 640 by 480 pixels—too bad if you're making animation for foreign distribution on the higher-resolution PAL or SECAM video standards. (You can render stills at any size.) Field rendering and dithered motion blur aren't on the feature list either, although a lower-quality motion blur technique is available.

Inspire comes with a library of several hundred ready-made 3D objects, as well as an interactive "3D learning experience" CD that covers the operation of the program and touches on animation history and mastery of 3D techniques. The CD offers some genuinely useful information, especially for the 3D novice, but it's buried under a heavy, incredibly slow interface chock-full of obnoxious animated icons, QuickTime movies devoid of content, and retro-DOS nostalgia.

Hapless tutorial aside, Inspire 3D is a very capable entry-level 3D program that should fill the need for LightWave-style tools without a LightWave-size price tag. Inspire 3D is destined to find its niche in the low end just as LightWave dominates the high end.—*Raf Anzovin*

GOOD NEWS: Offers most of LightWave 3D's features without the LightWave price. Excellent renderer.
BAD NEWS: Un-Mac-like interface. No IK. Can't output animation for PAL or SECAM video. Dumb tutorial CD.

REDJACK

REVENGE OF THE BRETHREN

From the creators of
Titanic: Adventure Out of Time

"RedJack: Revenge of the Brethren is a delight to play."
- Gamefan

"Swab the decks and get ready for some good, old-fashioned pirate action."
- PC Gamer

In-depth storyline



CINEMATIC

Stunning scenery



IN-GAME

Challenging puzzles



CINEMATIC

Non-stop action



IN-GAME

TEEN T AGES 13+ ESRB

THQ

Designed for Microsoft Windows 95

MacOS

An graphic adventure coming soon for PC/Mac hybrid

RedJack: Revenge of the Brethren, the RedJack: Revenge of the Brethren logo, Cyberflix and Dream Factory TM & © 1998 Cyberflix Incorporated. THQ™ 1998 THQ INC.

Download the demo at www.thq.com

Director 6.5 Multimedia Studio

MULTIMEDIA

COMPANY: Macromedia
CONTACT: 800-326-2128 or 415-863-4409, http://www.macromedia.com
PRICE: $995 (SRP), $199 upgrade
REQUIREMENTS: 68040 or faster, System 7.1 or later, 16MB of RAM, 85MB of free hard disk space, CD-ROM drive

With version 6.5 of Director Multimedia Studio, Macromedia incorporates a handful of new features and rolls in some version 6.0 features you could previously get only by download or special order. However, the other applications that make up Multimedia Studio—Sound Edit 16, Extreme 3D, and Xrez—haven't received any important updates in the version bump.

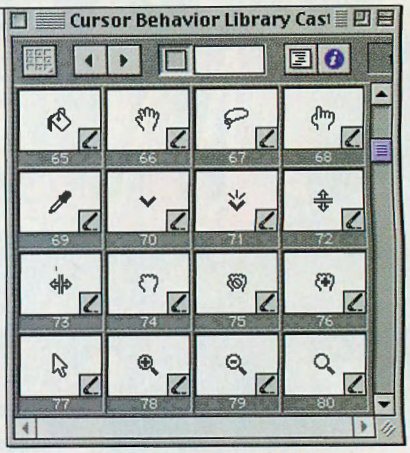
New to Director 6.5 is support for QuickTime 3.0 and QuickTime VR. Not only does version 6.5 play back QuickTime 3.0 movies, it also allows the author to rotate and mask QuickTime movies dynamically for dramatic effects. Director 6.0 supported QuickTime VR in a very rudimentary way, but 6.5 has scriptless support for basic QuickTime VR navigation and straightforward Lingo control of more advanced navigation such as pan, tilt, field of view, and hot spot detection.

In addition to providing new file format support via QuickTime 3.0, Director 6.5 can now import a number of new document formats and use them as the basis of a Director project. You can easily import PowerPoint presentations, converting each slide in a presentation to a section of Director's timeline authoring interface, Score. By bringing all of a presentation's sounds, images, and text into Director, you have more sophisticated control over media elements and navigation. Director 6.5 also imports Macromedia Flash projects, bringing the versatility and space-saving benefits of vector-based graphics to Director projects and Shockwave applets. Director can control most aspects of a Flash movie, including playback, scaling, sound playback, and rotation.

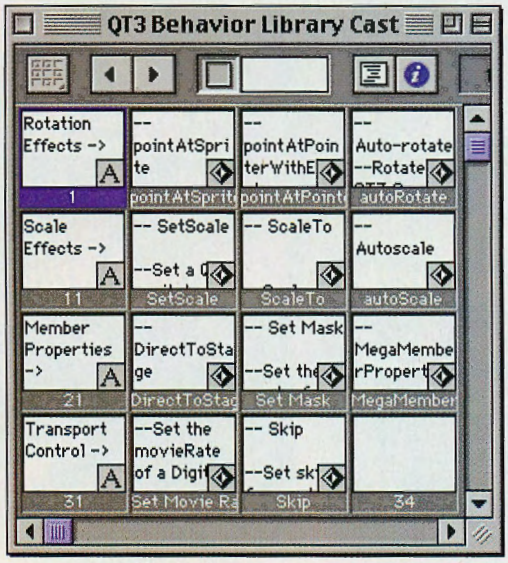
While Director 6.5 doesn't implement any major improvements to Shockwave, Macromedia has included a new AfterShock utility. AfterShock 2 provides a simple, fill-in-the-blank interface for generating HTML code, including page layout, embedding, and alternative image commands. AfterShock also allows you to create multiple settings for different browsers, making it easier to embed a Shockwave file properly for both Netscape and Microsoft browsers. While AfterShock certainly isn't a panacea for learning proper HTML coding, it is a valuable tool for multimedia authors mainly concerned with testing their movies or applets prior to deployment.

One of the most interesting add-on features introduced into Director 6.0 last year was the Save As Java command, which allowed content creators to output their Shockwave files as Java code. Save As Java is now a standard command in Director 6.5, providing support for many of Director's most common functions and Lingo commands. Save As Java automatically converts cast elements and Lingo scripts into native Java types, then attempts to compile them with the most optimized method. The Save As Java function is a definite step forward in Director's evolution, but the feature feels half-baked. Although the code is 100 percent Java, Shockwave movies recompiled as Java applets play just over half as fast as their Shockwave progenitors or applets built from the ground up in Java. Save As Java is a nice feature, but it is useful only for the simplest of Shockwave movies or as an instructional device, providing Java examples of analogous Lingo coding.

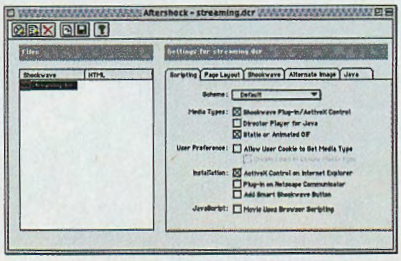
Macromedia did an excellent job of incorporating the features Director users need now, but failed to provide hard-copy documentation for these features. Users wanting to explore Quicktime VR navigation or the Save As Java feature will need to resort to either the online help or the written documentation on the CD. For a $199 upgrade you'd expect a printed supplement.—*Rick Sanchez*



A SMALL BUT HANDY NEW FEATURE in Director 6.5 is Cursor Behavior Library Cast, which makes using custom cursors a simple task.



THE ROBUST SELECTION OF QUICKTIME SCRIPTS in Behavior Library Cast supplements one of Director 6.5's most important improvements, QuickTime 3.0 support.



THE AFTERSHOCK UTILITY GENERATES HTML code for embedding Shockwave and Flash movies and Java applets into Web pages.

GOOD NEWS: QuickTime 3.0 and QuickTime VR support. Improved file and document format support.
BAD NEWS: Lack of updated print documentation. Relatively few new features considering the large change in version number.

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reviews

Crescendo G3 512K



Photo by KB

TRUE TO ITS LATIN ROOTS, Crescendo makes your old Mac grow.

HARDWARE

COMPANY: Sonnet Technologies
CONTACT: 800-786-6260 or 949-261-2800, http://www.sonnettech.com
PRICE: $499 (SRP)
SPECIFICATIONS: 215MHz to 225MHz G3 (depending on host machine), 512K backside cache, 2:1 cache bus speed ratio
REQUIREMENTS: Power Mac 6100, 7100, 8100, Performa 611x, or Radius 81/110

Gadzooks, this Mac is fast! It's a first-generation, PowerPC 601–based Performa, and the thing really smokes (yes, we're talking in 1998 terms). Thanks to Sonnet Technologies' Crescendo G3 512K upgrade card for the processor-direct slot, our four-year-old, pizza-box Mac sped up over 400 percent. Talk about a difference.

The Crescendo G3 512K works with any 6100, 7100, 8100, 611x, or Radius 81/110 Mac. It contains a G3 processor that runs at anywhere from 215MHz to 225 MHz (depending on the bus speed of the machine it's in), and 512K of backside cache accessed through a 2:1 ratio bus. We plugged the Crescendo into a Performa 6115 CD (the 30MHz bus it sports makes the Crescendo run at the full 225MHz), and man, did it ever fly.

With its original 60MHz 601 chip, the 6115 took on average 1 minute, 17 seconds to complete an 11-function Photoshop 5 action—complete with Radial, Gaussian, and Motion Blurs; a Mode conversion; a Feathered selection; and several other filters. Once equipped with the Crescendo, the same action took a mere 15 seconds! That's 5.13 times—or 413 percent—faster than with the original 601 chip. Symantec's Norton Utilities System Info likewise showed the massive advantage the upgrade offers. The original CPU scored a nice round 100, and after the upgrade the score hit 576.

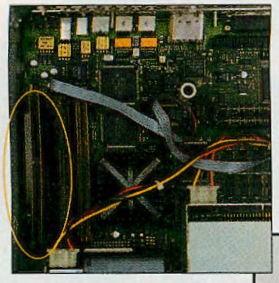
Of course, a modern 266MHz G3 still beats the upgraded 6115. The 266MHz G3 scored 714 in the raw CPU System Info test and took only 10 seconds to complete our Photoshop test. There are some deficiencies even a really good processor upgrade won't help. For example, our 6115 CD sports only a 30MHz system bus, its video subsystem doesn't exactly rock, and the hard-disk performance bites. In addition, it has only a 2X CD-ROM drive and—even worse—a tiny 350MB hard drive (we can't even keep Mac OS 8, Adobe Photoshop 5, Microsoft Office 98, and Bungie's Marathon Infinity on it at the same time). But at $499, the Crescendo offers modern speed for $800 less than the least expensive new Apple system, the iMac. And heck, the Crescendo costs only $100 per 100 percent increase in speed—pretty good, we say.

For the massive processor acceleration it offers, putting a processor-direct G3 card in a first-generation Power Mac is the best upgrade value available on the market today. If you're hesitant because you already have a 7100 or 8100 AV or video card plugged into your PDS, fear not—the Crescendo offers an on-board slot to support this. If you own a 6100 DOS or AV card, you're out of luck. We didn't encounter any stability issues or conflicts—the card ran smoothly. The Crescendo is simply a great deal.—*Robert Capps*

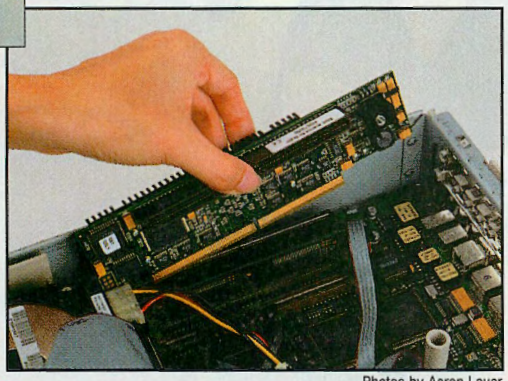
PHOTOSHOP DEXTERITY
AVERAGE TIME TO COMPLETE AN 11-STEP PHOTOSHOP 5 ACTION
The lower the number, the better the performance.

Performa 6115	1 min 17 sec
Performa 6115*	15 sec
G3/266-MHz	10 sec

* With Crescendo G3 512K.



THE 6100, 7100, AND 8100 POWER MACS have a special processor-direct expansion slot (Performa 6115 shown here).



JUST PLUG IN THE CRESCENDO and you're ready to fly.

Photos by Aaron Lauer

What's all the Bus Fuss?

Sonnet's Crescendo G3 varies its speed according to the bus of its host computer. Here are Sonnet's rankings (our test machine is in bold):

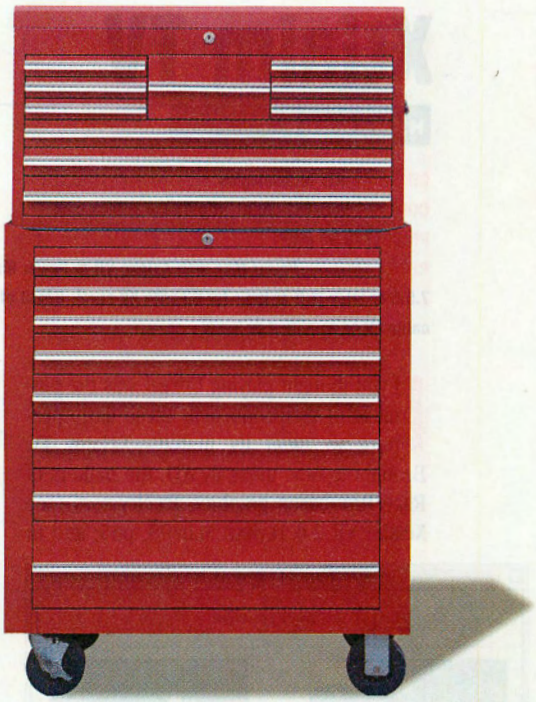
Computer Model	Bus Speed	Crescendo G3 215 Speed
6100/60, WS 6150	30	225
6100/66, WS 6150/66	33	215
6115/60	**30**	**225**
7100/66	33	215
7100/80, 8100/80	40	220
8100/100, WS 8150/110	36.6	220
WS 9150/120	40	220

GOOD NEWS: Massive speed increase. No stability problems. Great value. BAD NEWS: Only helps with processor-related deficiencies.

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When your Macintosh computer is not operating correctly, having the right tool to find and fix the problem is important. And as any technician will tell you, you can never have too many tools. TechTool Pro 2 checks more aspects of your Macintosh than any other utility available. Besides repairing and recovering damaged drives (including those with the new HFS+ format), you can also test all those other critical parts of your system that our famous competitor ignores like RAM, CPU, floppy drives, scanners, modems, Internet connections, CD-ROM drives and much, much more.

But just because TechTool Pro is the most advanced Macintosh troubleshooting utility available doesn't mean that it's difficult to use. In fact, we've added an easy-to-use interface that makes checking and fixing your Macintosh a snap. For the advanced user, our expert mode allows you to control and configure TechTool Pro in almost any way you wish.

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Xclaim TV

HARDWARE

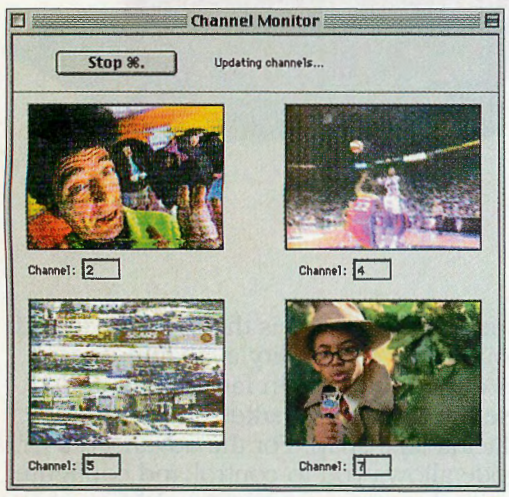
COMPANY: ATI Technologies
CONTACT: 905-882-2600, http://www.atitech.com
PRICE: $89.99 (SRP)
REQUIREMENTS: Power Mac with Xclaim VR or Power Mac G3 with AV card, System 7.5.5 or later (8.0 or later for G3 with AV card), 32MB of RAM, QuickTime 2.5 or later, cable TV or amplified antenna



Photo by Aaron Lauer

A NEW DESIGN FOR XCLAIM TV accompanies a supercool viewing experience.

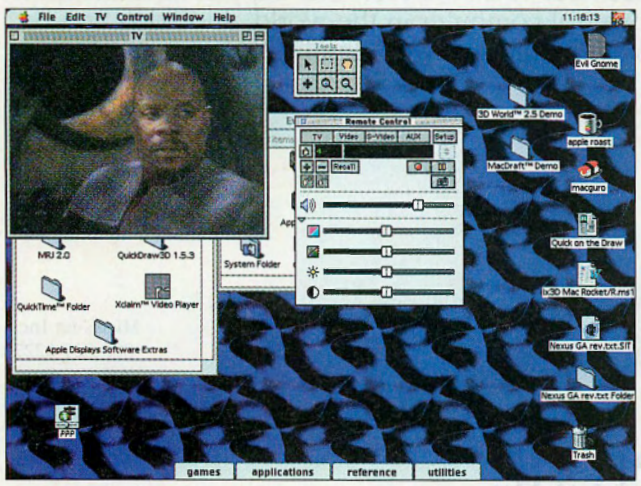
If you thought playing Unreal was the pinnacle of antiproductivity these days, prepare to meet its match—Xclaim TV. Brought to Mac users by ATI, the makers of Rage Pro–based graphics accelerators (see Xclaim VR 2.0 review, Mar/98, p65; and in this issue, Nexus GA review, p56), Xclaim TV brings television to your desktop. The newly redesigned purple pod, which resembles a spacecraft, houses an external TV tuner that you attach to ATI's Xclaim VR or a G3's optional AV card.



CHANNEL MONITOR ALLOWS YOU to keep track of what's on four other TV stations so you don't miss any Apple commercials.

Setting up Xclaim TV is easy, thanks to a well-written installation guide that depicts the various ports and connectors, necessary cables, and additional configurations for using the TV module with a VCR and camcorder. Installing the software, Xclaim Video Player, is also easy. When you launch the application, a friendly interface consisting of Remote Control, Tools, and a Video window appears on your desktop.

Use Remote Control to program Xclaim TV's features. Press the Record button to initiate the capture of QuickTime movies from your video source; adjust hue, saturation, brightness, and contrast; or choose Auto Tune to program all available channels. The Auto Tune function is especially useful when your broadcast standard is cable TV, as Xclaim TV supports 125 cable channels. You can even edit the list by naming each channel. And the fun doesn't stop there. Xclaim TV also gives you the power to lock and unlock channels using password protection. Who needs that V chip?



XCLAIM TV BRINGS TV to your Mac's desktop, making you both a Mac addict *and* a TV junkie.

The Tools palette allows you to select an area of the Video window. Use Marquee to select an area of the TV image, save it as a PICT file, or drag it into an application that supports drag and drop. Alternatively, use the drag-and-drop function to drag a single frame of video to the desktop, Pictures, Scrapbook, or another application.

In addition to those great features, we love Channel Monitor and Hot Words. Channel Monitor gives you delightful *fin-de-siècle* decadence; it previews live broadcasts from four different channels you select, updating them every few seconds so you can see what's playing elsewhere in TV land. Who wants to work anyway? Xclaim TV also offers closed captioning, providing a window that displays closed-captioned text from TV or videotapes. You can then save texts as transcripts, which means you'll never have to pay for transcripts again. And with closed captioning active, you can specify Hot Words you want Xclaim TV to detect. The TV can either alert you with a sound or pop Xclaim Video Player to the foreground so you never miss a beat.

ATI packed Xclaim TV with so many features, we can't think of any immediate drawbacks—except for loss of productivity on the job. You can program Xclaim TV to mute sound automatically if you put its TV window in the background, so when your supervisor walks by, one furtive click makes the difference between watching TV at work or at home—permanently. To be discreet, you can also resize the Video window to the smallest preset size, 80 by 60 pixels (the default size is 320 by 240 pixels), or define your own arbitrary size. Conversely, you can watch TV in full-screen mode up to 1024 by 768 (full screen depends on your current screen resolution). Based on our two-week experience, we can definitely recommend Xclaim TV, but we won't be responsible for your lost productivity! Who knows? While we were writing this review, we watched French chef Jacques Torres of *Dessert Circus* make a chocolate espresso tart.—*Jennifer Ho*

GOOD NEWS: Easy to set up. Fabulous features such as Hot Words and Channel Monitor. Cool new design. Entertainment on your desktop.
BAD NEWS: Entertainment on your desktop. Requires either Xclaim VR or a G3 AV card.



Aunt Ethel before Creation Station.™



Aunt Ethel after Creation Station.

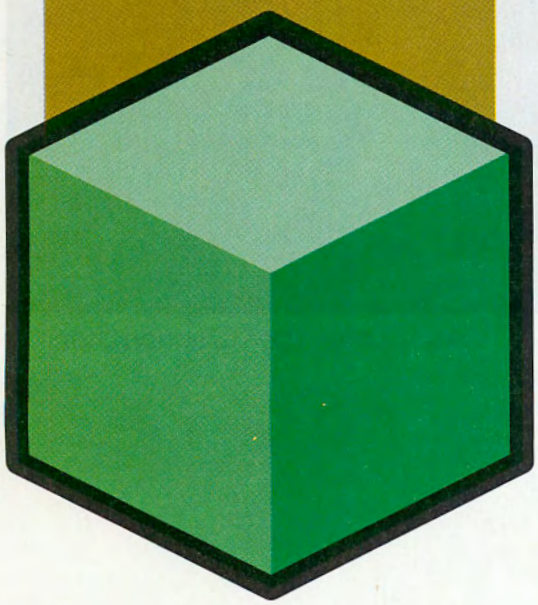
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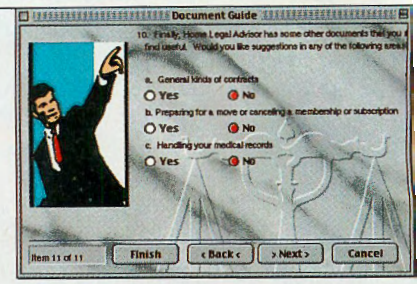
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Kiplinger's Legal Advisor

REFERENCE

COMPANY: Block Financial Corporation
CONTACT: 800-813-7940 or 816-932-4909, http://www.blocksoft.com
PRICE: $29.95 (SRP; comes with $10 rebate coupon)
REQUIREMENTS: System 7.0 or later; 8MB of RAM; 15MB of free hard disk space; 2X CD-ROM drive; 13-inch, 256-color monitor



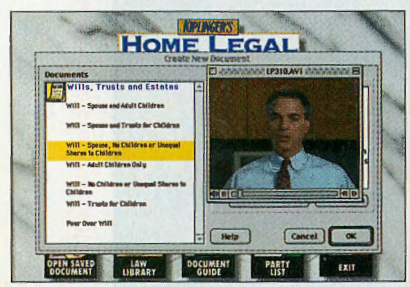
VAGUE INTERVIEW QUESTIONS and text that runs off the screen mar the Document Guide portion of Home Legal Advisor.

Block Financial bills Kiplinger's Home Legal Advisor '98 as "your complete personal legal resource" because it helps you customize more than 70 legal documents without consulting a lawyer. However, a number of disastrous user interface problems make using Home Legal Advisor frustrating and time consuming.

Home Legal Advisor comes on a hybrid CD-ROM from which you must manually extract the Mac version onto your hard drive—it doesn't provide a Mac installer.

Block recommends starting with the Document Guide, which interviews you with a series of 10 yes-or-no questions to determine which of the more than 70 legal documents you should prepare. Unfortunately, the questions aren't direct, and the modal window doesn't let you access explanations of legal terms from the Help menu. When you're finished, Home Legal Advisor presents a Document Advice window that explains in detail what documents you should prepare and why. You can't save the advice for future reference, nor does the window contain document links to get you started.

After the interview, you return to the main window and click the Create New Document button. A window appears, listing more than 70 documents. You can also click the Video Guidance button to open a QuickTime movie, which doesn't autoplay. For useful information, click the Doc Discussion button, which opens another dialog box with details on your chosen document. This information appears in a small, fixed-size window you can't print, save to disk, or copy to the Clipboard. You're forced to read the text on screen, and the scroll bar doesn't function properly.



INSIPID QUICKTIME MOVIES explain the basics of more than 70 different document types.

The small, modal windows make working with Home Legal Advisor difficult. For example, you can't cut and paste data from other applications, and performing tasks such as dividing your assets in a will is complicated. On top of the non-Mac functionality of dialog boxes and windows, standard keyboard shortcuts don't work properly. The Windows version offers spelling check, undo, and search and replace functions, but the Mac version lacks these features.

Rounding out the package is Law Library, which consists of electronic versions of *Gilbert's Law Dictionary, Home and Consumer Legal Guide,* and *Kiplinger's Handbook of Personal Law.* Having this information at your fingertips is better than nothing, but you can't search it, nor can you print anything for future reference.

Kiplinger's Home Legal Advisor could have been a really nice product had Block Financial created an easy-to-use program with standard Macintosh interface guidelines. The only thing this program has going for it is its low price.—*Owen W. Linzmayer*

GOOD NEWS: 30 days of free Internet access. Inexpensive legal reference.
BAD NEWS: Manual installation procedure. Modal dialog boxes. Violates Mac user interface conventions. Mac version lacks Windows parity.

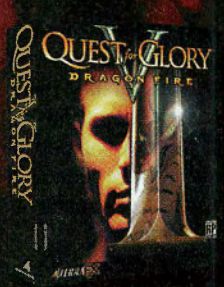
Upon further reflection, maybe you don't want to be King.





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- CD surround sound and a fully orchestrated score in stereo
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DRAGON FIRE



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reviews

Olympus D-340L



Photo by Aaron Lauer

HARDWARE

COMPANY: Olympus America
CONTACT: 516-844-5000, http://www.olympusamerica.com
PRICE: $699 (SRP)
REQUIREMENTS: 68040 or faster, System 7.1 or later, 16MB of RAM, 45MB of free hard disk space, CD-ROM drive, standard Mac serial port, 256 colors at 640 by 480 or better

Remember a time when you paid a fortune for a digital camera that took photos you might as well have drawn with a blunt stub of crayon? Well, the days of poor image quality are thankfully over, but until recently you still had to pay big bucks for a resolution that was fit to print. Not anymore: This past year the price of digital cameras has dropped like a bomb even as quality soars. The Olympus D-340L, the third in Olympus's 300 series of midrange pocket-size digital cameras, offers the quality and features a digital photographer needs, at a price even most amateurs can afford—Olympus dropped the price of the D-340L $100 this past June to its current $699.

The D-340L camera takes 1.3 megapixel (million-pixel) images in three compression modes. Using the 4MB SmartMedia storage card that comes with the camera, you can take 60 standard-quality images at 640 by 480 resolution, 18 high-quality images at 1280 by 960 resolution, or 9 superhigh-quality images at 1280 by 960 resolution with low image compression for better quality. Compared to other digital cameras in the same price range, that's great image quality and a good amount of pictures per MB. For about $90 extra, you can upgrade to an 8MB SmartMedia card, which stores double the number of images in each mode.

The camera offers some new features you won't find in its cheaper predecessor, the Olympus D-320L. Don't bother with the 2X Tele/Wide mode, which is supposed to give you the flexibility of a telephoto lens, but doesn't. Definitely check out the Macro mode, which allows you to take photos up to 4 inches away from your subject—any closer and you get artsy but incorrect exposure. The Macro mode takes some great—and highly detailed—images, and brings this camera much closer to competing with its bigger $1,000 cousin, the D-600L (see Apr/98, p59). Other cool features include a Sequence shooting mode, which allows you to take six to ten separate photographs at two frames per second; four flash modes, including red-eye reduction, fill flash, and low-light and backlight modes; and a Panorama mode. If you really start to feel gutsy, the D-340L features -/+1-step exposure control for manually adjusting picture quality. However, you probably won't want to mess with your exposure unless you're an educated amateur or a professional photographer, in which case you'll want more-sophisticated exposure control anyway.

The 2-inch LCD screen is great for reviewing images you've already taken, but avoid using it as your viewfinder, because it eats up battery power faster than you can say "cheese." If you must use the LCD for taking photos, you'd better plan on shelling out some extra cash for an AC adapter, which the D-340L doesn't include.

The software package makes downloading your JPEGs relatively easy. Just install Olympus Camera Utility, hook up the serial cable to your printer or modem serial port, open Olympus Camera Utility, click Select All, and then click Download. If you plan on manipulating your images beyond a basic nip here and tuck there, you'll want to use Adobe Photoshop; the version of Adobe PhotoDeluxe that comes with the D-340L offers only the most rudimentary image-manipulation features. You can also send images to a VCR or TV, or directly to your printer.

One major problem: We could not get the All-Frame Erase function to work. We followed the directions in the manual, but it would still only erase one picture at a time. Still, with the beautiful photos the camera is capable of taking, you probably won't want to erase too many of them anyway.—*Jeff Titterton*



THE D-340L'S MACRO MODE lets you get close up and personal with your pup. Check out the detail on that snout!

QUALITY PHOTOS AT A LOW PRICE—what more could you ask for (besides an even lower price, that is)?



GOOD NEWS: High-resolution, high-quality images. Easy to download images to your Mac. Loaded with features, including a great Macro mode.
BAD NEWS: Eats up batteries. No AC adapter included. All-Frame Erase function doesn't work.

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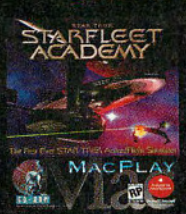


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GrooveMaker + Dancity

AUDIO

COMPANY: IK Multimedia
CONTACT: 800-747-4546, http://www.groovemaker.com
PRICE: $69 (SRP)
REQUIREMENTS: PowerPC 100MHz or faster, System 7.5.3 or later, 16MB of RAM, 50MB of free hard disk space, 2X CD-ROM drive



JUST DRAG AND DROP SAVED GROOVES—GrooveSequencer pastes them all together.

Enter GrooveMaker, IK Multimedia's groove-generating program that's bound to make the computing world a little hipper. Unleash the funky DJ within by composing high-quality dance grooves using the CD of sample loops, Dancity. The CD features over 500 samples of acoustic and analog instruments; GrooveMaker provides an eight-track stereo player, sequencer, virtual synthesizer, and import-export capability.

Getting started is one major setback. Although the interfaces are slick and cyber-looking, the operation isn't intuitive to anyone familiar with standard audio apps. The online manual explains it, but you can't access the manual within the program.

Once we got a grasp of how the program worked, its ease of use impressed us. The creation process consists of three sections: Virtual Synth Arpeggiator, GrooveMaker, and GrooveSequencer. A fourth section, V-Mix, serves as a groove randomizer (a virtual DJ).



CREATE GROOVES IN THE GROOVEMAKER section by layering up to eight tracks at a time.



First you load a song from Dancity. A song is a collection of eight-bar sample loops that share similar qualities such as sample rates (22kHz or 44kHz) and instrumental character. From techno to house, songs provide millions of sample editing and layering possibilities. You can also import sounds to layer.

The GrooveMaker section (the eight-track player) is where you construct and color a groove. Layer up to eight different samples; you control individual volumes, pans, and beats per minute and hear your creation in real time. The high-quality sample loops are classified as bass, bass drums, sound effects, melody lines, drum loops, synthesizer pads, or percussion elements. Saved grooves are the building blocks of your final mix.

You can also add instrumentation with Virtual Synth Arpeggiator. This three-octave keyboard lets you create phrases by selecting notes, which play in looped, sequenced succession from a choice of 99 voicings. Unfortunately, you can't create your own freeform melody line.

When you've saved enough grooves, glue them together in GrooveSequencer; you can insert them in any order and repeat them as many times as you want. You're limited to a 25-groove (200-bar) sequence, so you can't compile an extended dance mix (unless you export sequences into another audio recording program). If you're not a groove master, use V-Mix to produce a complete set of groove mixes automatically.

GrooveMaker wins points for giving the musically uninitiated a tool they can use. Though you can't fully edit loops, stray beyond the regulated eight bars, or access standard effects such as reverb or delay, the import and export capabilities let you further your work in progress.—*Kris Fong*

GOOD NEWS: You don't need to know anything about music or recording to explore this program.
BAD NEWS: Interface's learning curve doesn't promote immediate musical gratification.

Some people think, Voodoo is just for games. Not quite!



We haven taken Voodoo just this little bit further. In fact VillageTronic is the first and only hardware developer on the planet to make the impossible happen: We tamed the insanely fast Voodoo hardware and forced it's output into a 2D window. Yes you're right! 3D Overdrive is the only way to get every important 3D API you want and need in one board. Period.

- **RAVE** for your favorite 3D apps and games,
- **GLIDE** for incredible graphics with games as well as
- **OpenGL** to be prepared for whatever the future will hold.

So if your beloved WinTel buddy is around again, why not driving him nuts by showing off your new hardware? Oh and by the way please don't forget to tell him that 3D Overdrive is -of course- ... MacOS only!

What do the industry pundits say?

"3D Overdrive is the only 3Dfx card on the Mac that actually works!"

says Brian Greenstone, Engineer of the Quickdraw3D developer team at Apple Computer, Inc. and CEO of Pangea Software.

Expect the impossible from the Masters of Voodoo ... to be continued ...

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power up

Dreamweaving, file-making, Web-developing know-it-alls spill their guts.

DESIGN & GRAPHICS

Dreamweaver's DHTML Dynamics

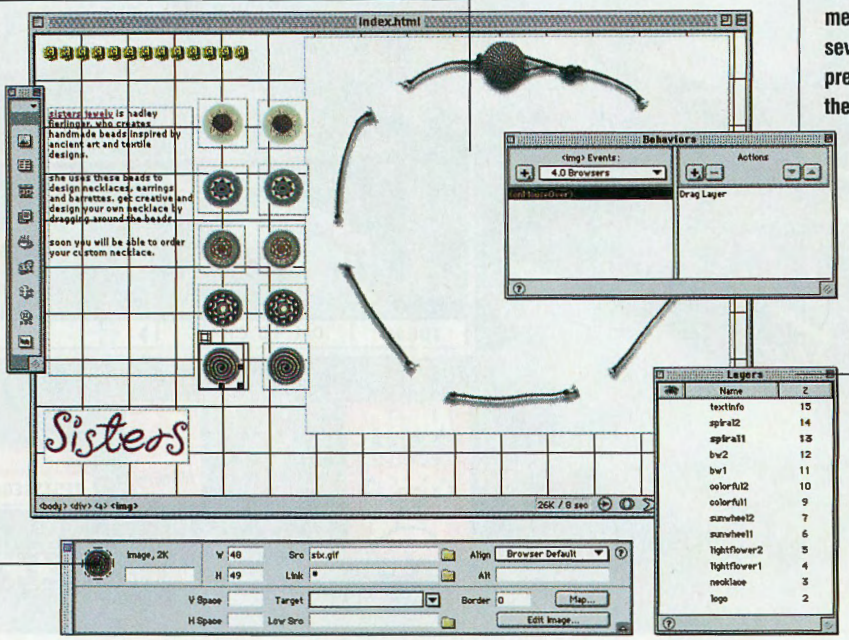
by Wayne Bremser

This window is where you do the main page design. It works much as any page-layout program does, only the output is meant for the Web.

The Behaviors window lets you choose several actions (such as opening an URL or showing a message) that you can tie to several different events (such as pressing a mouse button or rolling the cursor over an image).

With a bow to the Properties window in QuarkXPress, Dreamweaver includes its own Properties palette.

The Layers window becomes important when you're assigning behaviors. Name your layers right at the start, or it'll be a little piece of hell to straighten them out later.



FIND A DEMO OF DREAMWEAVER, all the GIFs in this article, and a mirror of the Sisters Jewelry Web page on The Disc.

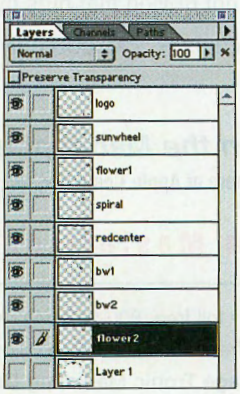
The *D* in DHTML stands for Dynamic, bucko, and with it you can do all sorts of things on a Web page that used to require plug-ins. Yes, DHTML only works in the 4.0 generation of browsers, but we can't all wait around for every slacker still browsing with a 2400-baud modem and a withered copy of NCSA Mosaic 1.0. Thanks to Macromedia's latest shiny tech toy, Dreamweaver, Web designers can now put together a page faster than you can say "browser of choice." If you don't own Dreamweaver, you can pick up a demo on The Disc or download a free 30-day trial at http://www.macromedia.com. Those who already own Dreamweaver 1.0 should definitely get the free upgrade, 1.2, as it has a slew of bug fixes and new features, including new behaviors—ways to assign DHTML actions to page elements.

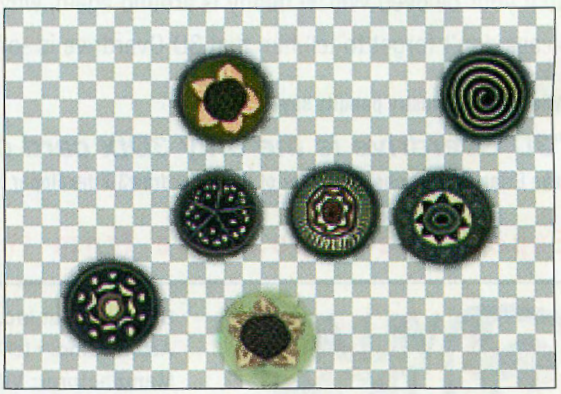
I recently used Dreamweaver's DHTML prowess and its Drag Layer function to create a simple interactive page for Sisters Jewelry at http://www.sistersjewelry.com/diy. At this page, visitors can drag five different beads around in various patterns to create a custom necklace design. This is a very elementary example of interactivity, and I could add plenty of other interactive elements with Dreamweaver and some basic JavaScript, but it makes for a good introduction to what you can do with Dreamweaver and DHTML.

FIND THE SISTERS JEWELRY PAGE on the Web at http://www.sistersjewelry.com/diy.

1 Image Preparation

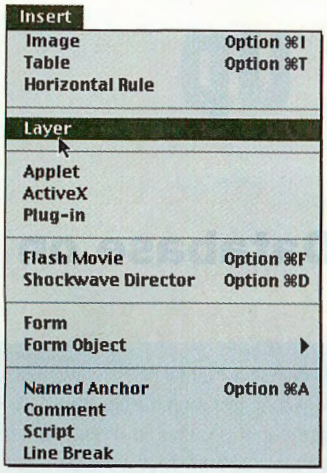
You can use tools such as Adobe Photoshop, Adobe ImageReady, or Macromedia Fireworks to do the image manipulation required for the first step. For this project, I cut all the beads from a picture of a finished necklace and gathered images of other beads. In Photoshop, closely trim the background from each image and put each image in its own layer. Then save the images as transparent GIFs with a Web-safe (universal) 216-color palette. Each bead image is under 2K in size, and the necklace occupies just 5K, making for a speedy download.



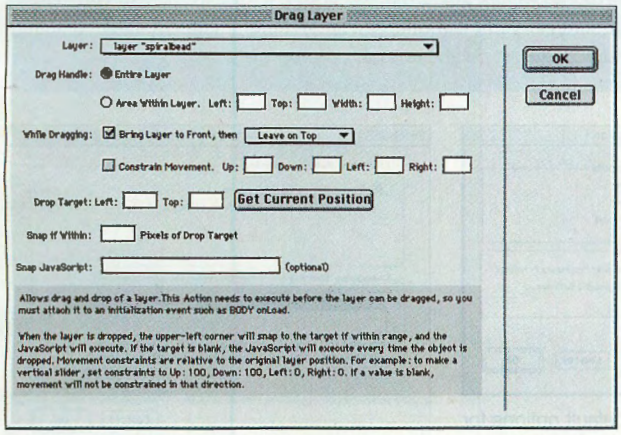


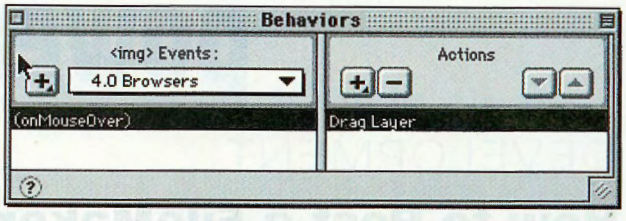
2 Add Layers

Once you have prepared all of your images, you are ready to fire up Dreamweaver and arrange your page. Since you are designing for 4.0 browsers, each image will be in its own layer. Go to the Insert menu and select Layer (or select the Layer icon from the Object palette). The layer appears as a box with a handle at the top left; try dragging it around the page. With the cursor in the layer, select Image from the Insert menu (or you can get fancy and drag the image right into the layer).



At this stage of my project, I added one of my bead images to a layer. There are two important details to remember concerning layers. First, to save yourself confusion, always name every layer. Open both the Layers window (from the Window menu) and the Properties window (from the Window menu). With the layer selected, you can enter a descriptive name in either window. Second, resize the layer to match the size of the image. You can either resize the layer by hand or enter new dimensions in the Properties window.

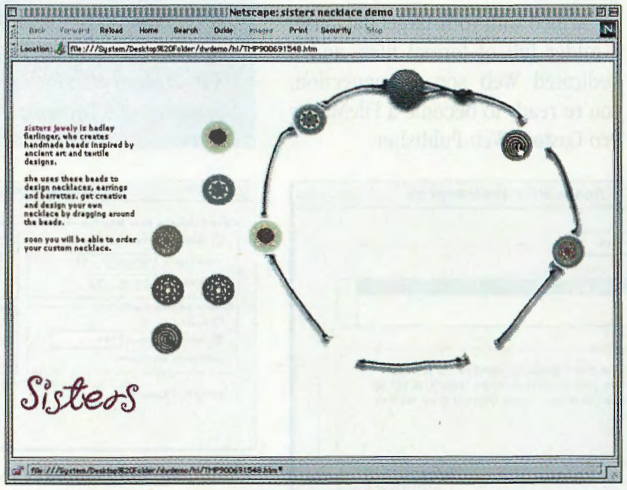




3 Add a Behavior

Since you want to drag a layer, it would seem logical to select that layer and add the Drag Layer behavior. However, you actually want to trigger the Drag Layer option by mousing over the image itself. Open the Behaviors window (from the Window menu). Select the image inside the layer (you can tell it's selected if it shows up in the Properties window).

Two panes make up the Behaviors window. The left side (Events) shows events and gives you a choice of browsers. The right pane (Actions) lets you add and remove actions for the events (when X occurs, Y happens). With the image selected, select (OnMouseOver) from the Events pane on the left and 4.0 Browsers from the pull-down menu. The Drag Layer behavior then activates when the user's mouse is over the image (not the layer).

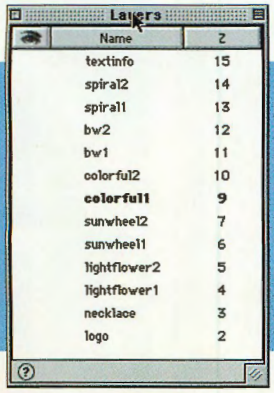


4 Drag Layer

In the Actions pane of the Behaviors window, click the plus (+) icon and select Drag Layer from the menu. The Drag Layer behavior dialog box pops up. This dialog box has many options, but we're only concerned with the first option at the top of the box, which allows you to choose which layer to drag. When a user mouses over a certain image's layer, you want that layer to be draggable. From the list of layers you have named descriptively, choose the correct one.

5 Finishing Up

After you've created one draggable image, it's a good idea to test it before doing a bunch more. Select Preview In Browser from the File menu. To create additional bead images to drag for my page, I added new layers and repeated my steps (with a new name for each layer). I also reused each bead image to save bandwidth and included a bunch of different layers to add the necklace image and the company logo. To finish, upload and test your project to make sure it works.



LAYER TIPS

Always name your layers. When adding DHTML behaviors, it's often necessary to choose which specific layer receives an action. This is tricky if your layers are all named "layer2," "layer3," and so on.

Use the Layers window. The Layers window is quite powerful. Much like its namesake in Photoshop, it lets you change the names on layers, but more important, it allows you to change the Z index of a layer by dragging that layer up and down the list. This index controls which layer appears on top.

Close the Layers window. If you're on a slower Mac and you have a document with a whole bunch of layers, try closing the Layers window when you aren't using it, and see if you get better performance.

Use correct layer sizes. If you want a layer to be the same size as an image, create a layer smaller than your image and drag the image into the layer. The layer resizes automatically to fit the image.

power up

DEVELOPMENT

How to Post a FileMaker Database on the Web

by Dave Prochnow

In "10 Tips for FileMaker" (July/98, p38), we showed you how to design, create, and manage a FileMaker Pro database. Now Mac addict Bob Boyle of the New York Academy of Sciences has the following question: "Why don't you do something on how to post a database to the Web using FileMaker Pro?" Never let it be said that we don't aim to please (or kowtow to other demands, if the price is right). So Bob, here's your database!

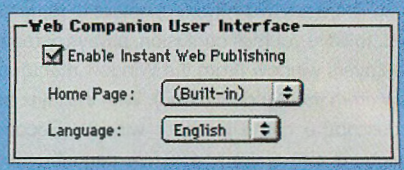
Armed with your target database, a folder full of format files, and a dedicated Web server connection, you're ready to become a FileMaker Pro Custom Web Publisher.

Delivery Methods

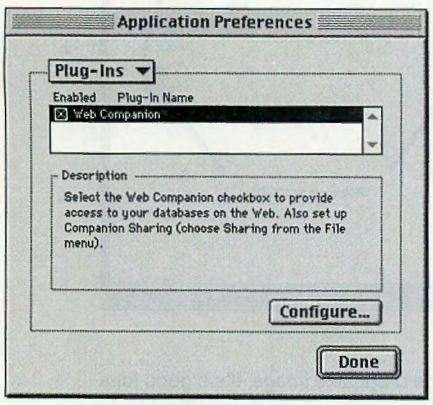
There are three ways to deliver a FileMaker Pro database to an adoring online audience. In this article, we've chosen to focus on the Custom Web Publishing option, which is the last one listed. We just thought you should know about the others.

■ **HTML Tables.** This is the simplest delivery method. Just export your database in the HTML-table file format. We described this technique in July's "10 Tips for FileMaker."

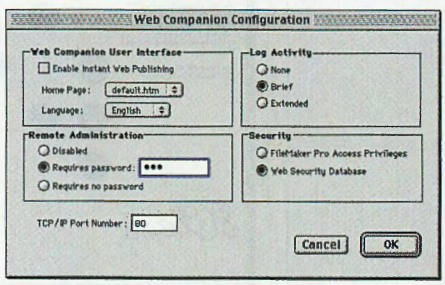
■ **Instant Web Publishing.** If you have a need for speed, but an 800K HTML table is out of the question, then FileMaker Pro allows you to open your database to the world without writing one line of code. This type of publishing, however, is rather generic in its appearance, and somewhat limited in its flexibility. While these limitations might be acceptable in an office-based intranet, this is not the image you want to convey to the rest of the world.



■ **Custom Web Publishing.** Without question, this is the most powerful method for painting a customized user interface on your otherwise pedestrian database. In order to deliver your data with Custom Web Publishing, however, you must write special HTML files called format files that contain Claris Dynamic Markup Language database tags.



1 The key to becoming a successful custom Web publisher is to set up your FileMaker Pro Web Companion correctly. To begin the process, select the Preferences option from the Edit menu. Inside Preferences, choose Application and click on the Plug-Ins option from the pop-up menu. Then click on the Web Companion check box to activate FileMaker Pro Web Companion.

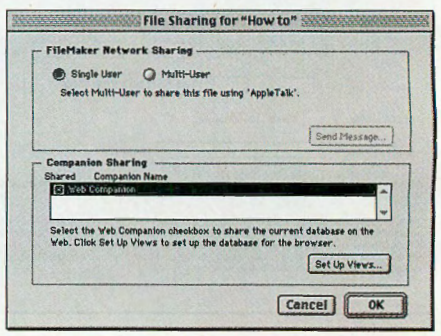


2 Although most of the default options for the FileMaker Pro Web Companion configuration should work out of the box, you will need to do some minor tweaking to enable Custom Web Publishing. To begin the configuration process, click on the Configure button. You should pay particular attention to the following options:

■ **Enable Instant Web Publishing.** This option must be unchecked.

■ **Home Page.** Make sure your custom home page is sitting in the top level of the Web folder in your FileMaker Pro folder. Then choose this home page from the Home Page pop-up menu.

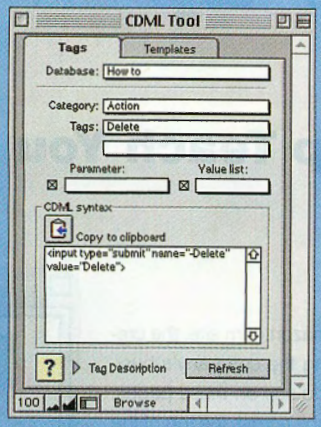
■ **TCP/IP Port Number.** The default value for this option is the common HTTP port number 80. If your server is already using this port, FileMaker Pro has an Internet Assigned Port Numbers Authority registration assignment for port number 591 that is dedicated to the FileMaker Pro Web Companion. To use this alternative port number, you must append both a colon and this new port number to your IP address (for example, 111.22.33.444:591).



3 Before the masses can access your database, you must enable file sharing. This option is relevant only to the actual database that you will publish. Open the database you want to post on the Web. Then choose Sharing from the File menu. Click the Web Companion check box inside the Companion Sharing area. Finally, click the OK button. Your database is ready for publication.

You Say HTML and I Say CDML

The language of choice for inserting database references into Web pages is CDML. You should copy all HTML and CDML files into the FileMaker Pro Web folder. You can add CDML tags to your format files by inserting your tags manually into your favorite HTML text editor or by using the CDML Tool. The latter is an automated tag-creation program located in the Web Tools folder. Use it to quickly churn out format files for handling any Custom Web Publishing chore.

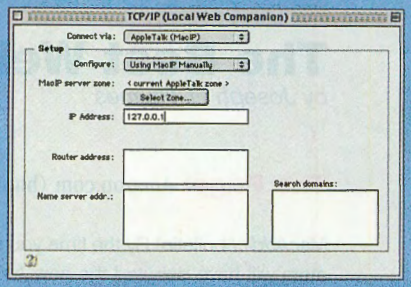


The Web What?

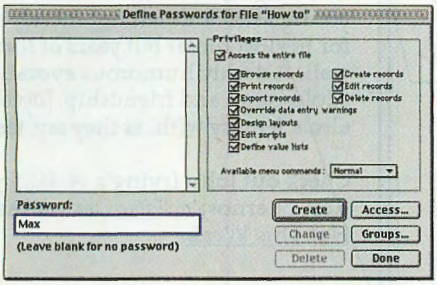
In order to provide a communication link between Web browsers and your database, FileMaker Pro comes equipped with the FileMaker Pro Web Companion. This plug-in, located in the FileMaker Extensions folder, extends GET, PUT, and CGI support to a FileMaker Pro database.

Don't Have No Stinkin' TCP/IP

For those folks who don't possess a dedicated Web server, fear not. You can easily fool FileMaker Pro Web Companion into thinking that you have a direct Internet connection. Be forewarned, however, that this alternative configuration will prevent you from accessing the Internet. You must reestablish your former TCP/IP account prior to returning to the network. If you'd like to experiment with this local connection, follow these simple steps:



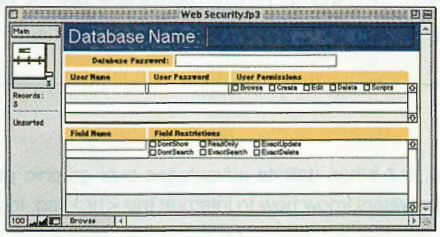
1. Open the TCP/IP control panel, then select Configurations from the File menu.
2. In the Configurations window, duplicate the Default configuration, give it a name (such as *Local Web Companion*), and click the Make Active button.
3. Enter these values for your Local Web Companion configuration:
 Connect Via: AppleTalk (MacIP)
 Configure: Using MacIP Manually
 MacIP Server Zone: <Current AppleTalk Zone>
 IP Address: 127.0.0.1
4. Save your new settings and close the TCP/IP control panel.



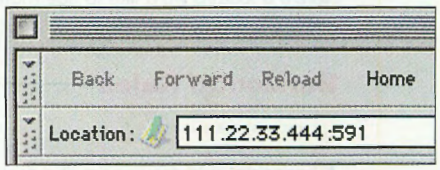
4 One of the biggest concerns of posting your database online is data security. The FileMaker Pro Web Companion offers two levels of security:

■ **FileMaker Pro Access Privileges.** These are the file privileges you can control from inside FileMaker Pro. If you require a password to access your database, then FileMaker Pro presents online visitors with a standard Name/Password dialog box. (FileMaker Pro Web Companion verifies only the password field of this dialog box.)

■ **Web Security Databases.** If you want more comprehensive control over access to your database, then you can use the Web Security document that is included in the Databases folder of the Web Security folder. To build your Web security database, first double-click on the Web Security.fp3 FileMaker Pro document.



5 Select New Record from the Mode menu and enter the name of the database for which you are establishing security. Then enter the user information and privileges you want associated with your database. Enter *All Users* in the User Name field if you want to provide Web visitors access to your data. Use only alphabetic or numeric characters in your password fields. Differences in browsers and platforms may render other characters (such as spaces) incorrectly in your password field.



6 All systems are go for the launch of your online database. Remember these four important points, however, to ensure that your database is accessible to the masses:

■ **Port Number.** If you have to utilize the alternative port number 591 for providing access to your database, then you must append this value to your IP address.

■ **Web Server.** In order to serve your database to the public, you must use a Mac connected to the Net via a dedicated full-time service, such as T1, ISDN, or frame relay.

■ **Format Files.** Any HTML page that will dynamically display FileMaker Pro database information must contain CDML tags. These data-aware pages are known as *format files.*

■ **Web Folder.** Not only must FileMaker Pro and the FileMaker Pro Web Companion be installed on your dedicated Web server, but you must assemble all format files and HTML pages into a folder named *Web.* For proper operation, you have to place this folder inside the FileMaker Pro folder.

power up

DEVELOPMENT

The Best Web Pages Help Teach You Design

by Joseph O. Holmes

The Page: Amazon.com (http://www.amazon.com)

MacAddict bulletin! By the time you read this deconstruction of the Amazon.com site, the creators will have debuted the new Amazon.com Music Store, expanding the company's business into online CD sales. The site still looks pretty similar to what you see on these pages, though rearranged slightly and with the addition of Books and Music tabs across the top of the page. (Just so you know—the tabs are nothing more complicated than hyperlinked areas on a large client-side image map, keeping in spirit with the simplicity of the entire site.)

Design and Layout

Amazon.com puts a huge amount of text on its welcome page (we have room to show less than half the entire page). While it's a nice general rule to limit a page to a couple screenfuls of information—the maximum a typical visitor can absorb—good designers know how to break rules. To prevent visitor overload, the Amazon.com designers aimed for simplicity.

First, the designers avoided the clutter of extra graphics, background designs, and an elaborate layout. The page is a simple two-column arrangement on a plain white background.

Text-Only Option

Here's a feature we'd like to see more often. Even though Amazon.com loads fast, the page offers a text-only alternative.

Horizontal Rules

```
<hr noshade size=1>
```

A horizontal rule may seem like a cliché, but it has definite advantages over graphic page dividers. For one thing, character-based browsers know how to interpret the <hr> tag, inserting a row of dashes or underscores.

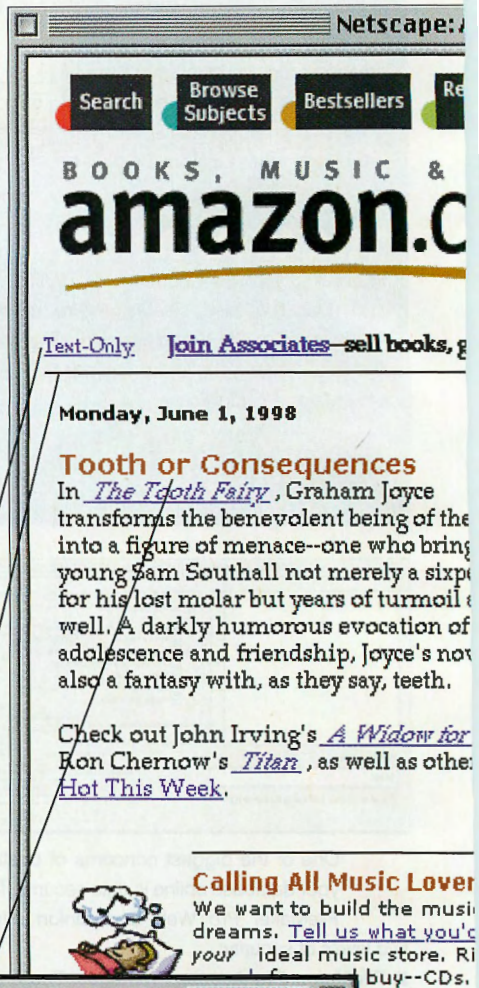
In keeping with their theme of simplicity, the Amazon.com designers used the *noshade* attribute to eliminate the default 3D appearance. Then they set the rule to *size=1*, making it one pixel thick rather than the default three. The rule ends up looking more like a basic magazine or newspaper rule than a Web-page artifact.

Type Design

```
<font face="Verdana,Helvetica,Arial" size=-1 color="#000000">
<b>Monday, June 1, 1998</b></font><p>
<font face="Verdana,Helvetica,Arial" size=+1 color="#CC6600">
<b>Tooth or Consequences</b></font><br>
```

The unusual typeface is not a graphic, but the commonly available Verdana face. Take note of the three alternatives the HTML includes—Verdana, Helvetica, and Arial. If the visitor's machine doesn't have the first choice, the site substitutes the second, then the third. To be even more forgiving, the HTML could have specified nonserif as the final choice; this would have substituted the visitor's default nonserif font for the other choices. To keep the page simple and readable, the designers chose a mild, pleasant color for these headings.

Finally, notice that the page marks its font sizes in relative terms—that is, using the code *size=+1* rather than, say, *size=5*. A typeface's precise size is less important than its relative size. For example, the precise size of a heading is less important than the fact that it's larger than body type.





ALSO CHECK OUT THE $5 SHAREWARE COLOR PICKER PRO (http://www.rootworks.com/cpp/download.html), which includes features such as an eyedropper and a hex converter. If you often work with colors on your page, consider investing in Pantone ColorWeb, which puts the 216-color Internet-safe palette in your Mac's universal color picker. The package also includes a handy booklet of color swatches.

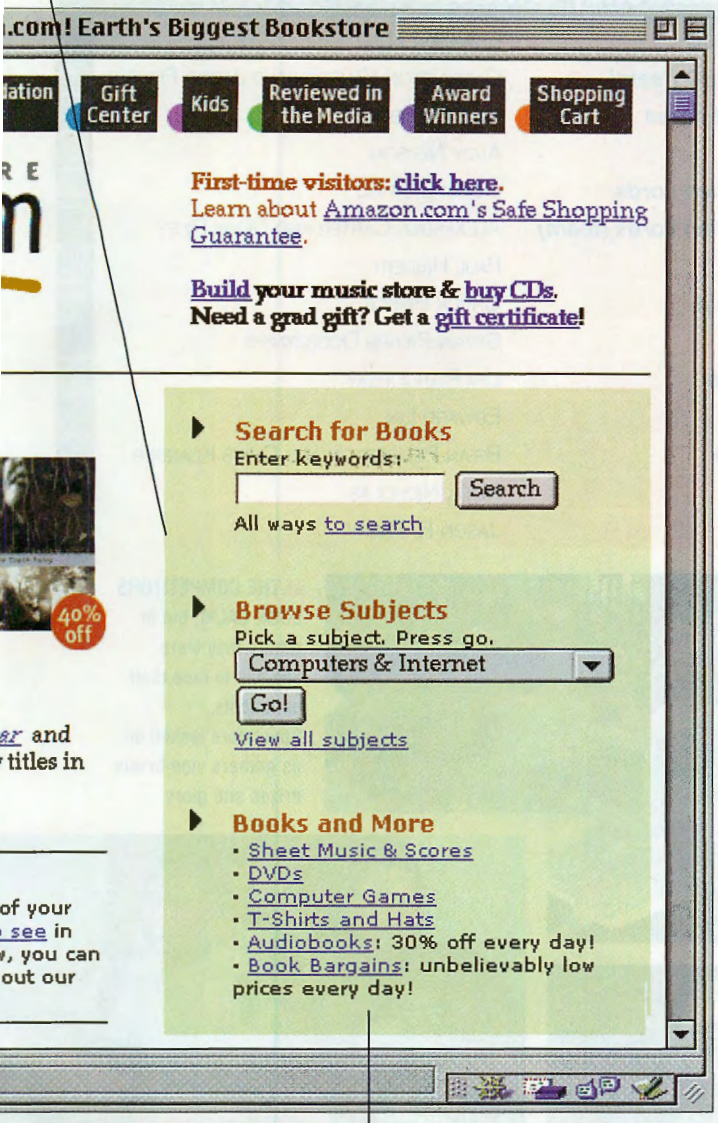
Spacer Columns

```
<td width=3% valign=top><br></td>
```

To keep some white space between the two main columns, the designers used a third, empty column, set to 3 percent of the window's width. (The valign attribute sets the alignment inside the table cell—in this case, to the top).

```
<td width=30% bgcolor="#ffffcc" valign=top>
```

The right-hand column's background color is a subtle shade of yellow (#ffffcc). This sets it apart as a kind of sidebar, keeping the main emphasis on the left column.



Fake Bulleted Lists

```
<font face="Verdana,Helvetica,Arial" color="#CC6600"><b>Books and
more</b></font><br>
<font size=-1 face="Verdana,Helvetica,Arial">
<b>&#183;</b> <a href="/exec/etc">Sheet Music & Scores</a><br>
<b>&#183;</b> <a href="/exec/etc">DVDs</a><br>...
```

Look closely at this HTML—it creates a fake bulleted list. The "middledot" character *·* is bolded to act as a bullet. (You can create an indented list with a series of nonbreaking spaces using the character * *.) This way, the page designers have more control over the exact look—the indentation, for example, and the spacing of lines.

If you'd like to see a particular Web page deconstructed, drop a line to Professor Web at professor.web@pobox.com. Please remember that the professor can't reply to every query personally.

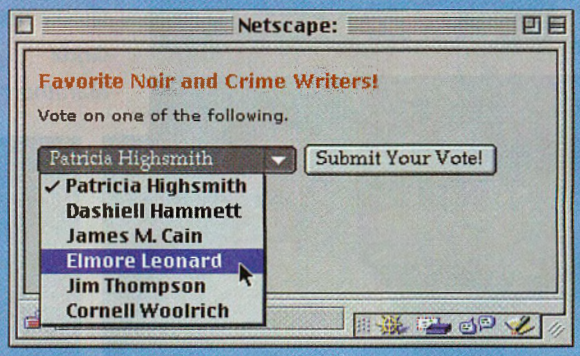
Forms

Amazon.com's Browse Subjects menu looks simple enough, but it's based on a *form*, which usually requires two things many Webmasters don't have: access to the Web server and CGI programming knowledge. However, even without server access or CGI expertise, you can use one kind of form—the mailto. Rather than sending the visitor's data to a small application on the Web server, the page simply emails the data. There's no room here to explain all the details of forms—refer to a good HTML reference such as O'Reilly & Associates' *HTML: The Definitive Guide* for more info—but here's a three-part overview of the mailto:

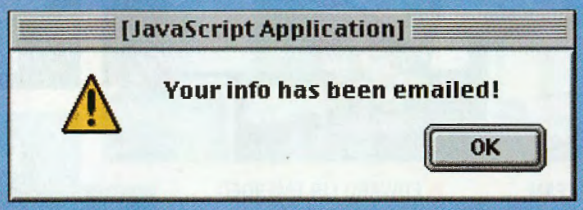
1. Here's the HTML:

```
<form method="post" action="mailto:professor.web@pobox.com"
enctype:"text/plain" onSubmit="window.alert('Your info has
been emailed!')">
<select name=vote>
<option value="Elmore Leonard"> Elmore Leonard
<option value="Jim Thompson"> Jim Thompson
<option value="Cornell Woolrich"> Cornell Woolrich
<option value="Patricia Highsmith"> Patricia Highsmith
<option value="Dashiell Hammett"> Dashiell Hammett
<option value="James M. Cain"> James M. Cain
</select>
<input type="submit" value="Submit Your Vote!">
</form>
```

2. This is what it looks like online:



3. This is the result:



OnSubmit, a JavaScript command, puts up a window displaying the text that follows the onSubmit command. This is vitally important because, unlike normal forms, this one offers no visitor feedback—no page appears saying, "Thanks for your vote!" Without some kind of notice, your visitor will click the Submit button over and over. The JavaScript alert prevents that.

Enctype is a form command that keeps the sent data in a readable form. Run a test without the enctype line and see what shows up in your email.

All Too Common Warning: Mailto forms work well only with the latest browsers. Test your form with earlier browsers to see if you find the results acceptable. Then add a warning note along the lines of "Visitors with Browser X should email their vote to mudpies@specious.net." The action tag defines the method of posting the data. The mailto action emails the results to the address immediately following it.

power up

FUN & GAMES

National Macintosh Gaming Championship

And the Winners Are...

We're back from the first National Macintosh Gaming Championship, which took place this year at Macworld Expo New York. The competitors were all valiant and showed true sportsmanship. Bravo! For those of you who couldn't attend, here are some snapshots of the gaming scene.—*JH*

Congratulations, Winners and Participants!

Duke Nukem 3D	Edward Lin
Duke Nukem 3D (team)	Carrington Vanston and Jacob Fisher
F/A 18 Hornet Korea	Paul Hibbert
Mars Rising	Andy Nelson
Myth: The Fallen Lords	Jason Shapiro
Myth: The Fallen Lords (team)	Alexander Carter and Devin Riley
Ares	Paul Hibbert
Cobra Gunship	Chuck Pierce
Bonkheads	Syvain-Pierre Dobrzynski
Carmageddon	Lev Piatigorsky
Quake	Edward Lin
Quake (team)	Brian Pemberton and Chris Keander
Gridz	Mark Nicholas
Marathon	Jason R. Parry



■ THIS WAS THE GATEWAY to the competition area. Only the brave ventured into the unknown.



■ THE QUAKE TEAM, Chris Keander and Brian Pemberton, made other gamers shiver and shake.



■ THE COMPETITORS LOOK CALM, but in reality they were anxious to face their opponents. Spectators looked on as gamers vied to win prizes and glory.



■ EDWARD LIN EMERGED VICTORIOUS in not one, but two competitions: Duke Nukem and Quake. Here, Edward graciously shows us his prize.





■ ANDY NELSON SQUASHED aliens in Mars Rising.



■ PAUL HIBBERT RIPPED UP the competition in F/A 18 and Ares.



■ THE DUKE NUKEM TEAM, Carrington Vanston and Jacob Fisher, fragged challengers and was nicely rewarded.

■ JASON SHAPIRO AND BUNGIE'S DOUG ZARTMAN CELEBRATE Shapiro's victory in Myth: The Fallen Lords.

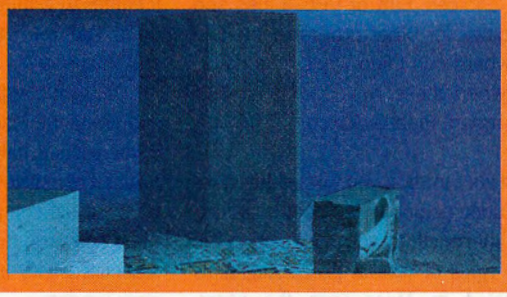
PREVIEW

Nightfall

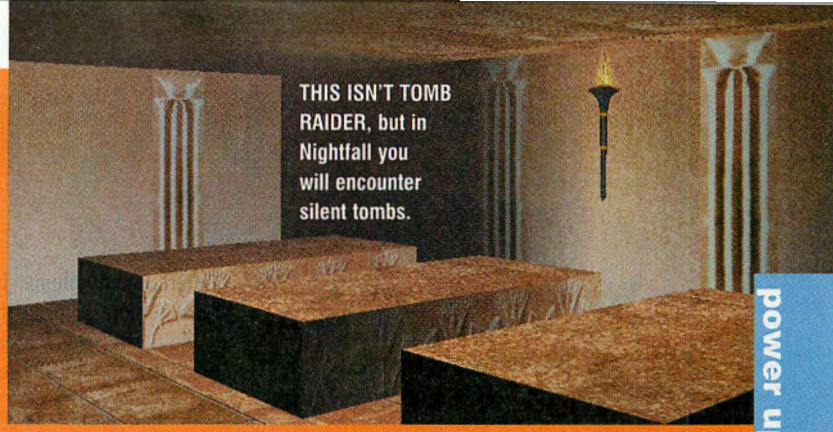
Altor Systems: 650-321-1416, http://www.altorsys.com

You're an archaeologist. When you're in the midst of exploring an Egyptian tomb, an earthquake traps you underground. To find your way to safety, you must probe the mysteries of the tomb and solve a rich variety of puzzles based on historical events and ancient Egyptian myths.

Nightfall, under development by Altor Systems, is a nonviolent adventure game with an intriguing story line, textured graphics, and a true 3D environment that allows you to walk anywhere you can reach. You also have a virtual hand so you can pick up objects and use them to advance to the next level. Nightfall didn't have a publisher at press time, but the game is scheduled to reach store shelves in December.—*JL*



THE 3D ENVIRONMENT beckons you to explore Egyptian mysteries.



THIS ISN'T TOMB RAIDER, but in Nightfall you will encounter silent tombs.



READ THE IMAGES ON THE WALLS to gather clues.

PREVIEW

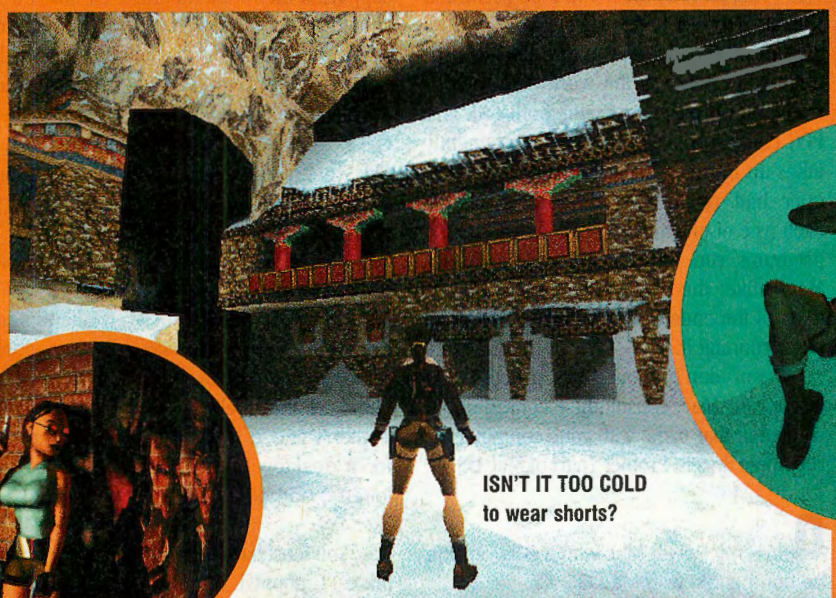
TOMB RAIDER II

Aspyr Media: 888-212-7797, http://www.aspyr.com

It's official! The queen of PC and console mayhem will bring her tough-girl grit, pluck, and feminine bravura to the Mac in the next few months. Lara Croft, one of the most popular game characters *ever devised, will star* in Aspyr Media's Tomb Raider II for the Macintosh, to be released before Christmas. Tomb Raider I will follow shortly as "an inexpensive game," and the extra Tomb Raider "gold levels" will come soon after, probably as a free download. Way to go, Lara. Glad to have you aboard. Everyone is pretty familiar with the tomb-raiding goddess, but you can check out the pix.—*JL*



RAIDING TOMBS IN VENICE? Where are the gondolas?



ISN'T IT TOO COLD to wear shorts?



LARA DOES THE FROG STROKE to get out of trouble.



YOU'VE SEEN THE FACE, and you'll see it again, but on a Mac.

power up

ASK US

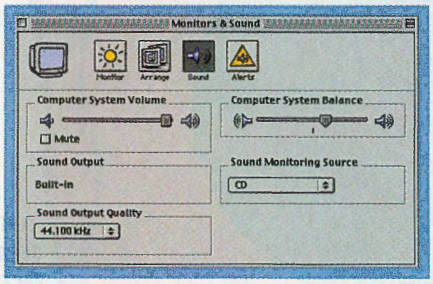
We answer your technical questions, no matter how simple or complex.

Q I have a Performa 5260 running Mac OS 8.1. Ever since I bought this computer, it has set the volume to the highest possible position. I go into the Monitors & Sound control panel and lower the volume to a quieter setting, but after a few restarts it goes back to the loudest setting. I've tried trashing Finder Preferences, Monitors & Sound Preferences, and even doing a clean install of the OS. Is there anything else I can try?

A There are numerous possible causes for your problem, and an equally bewildering collection of potential cures, but the first thing you should try is restarting with extensions off (by holding down the Shift key at startup), then trashing the Sound Preferences file that resides in the Preferences folder inside the System Folder. This is not the same file as Monitors & Sound Preferences, which you already deleted. If that doesn't work, consider zapping the parameter RAM by holding down Command-Option-P-R at startup until you hear the startup sound twice. You will have to reestablish various settings such as the Keyboard control panel's Key Repeat Rate and Cache Size in the Memory control panel, but if this solves your problem, I think you'll agree that the slight inconvenience is a small price to pay to avoid being blasted out of your chair by the startup sound every time you turn on your Mac.

Finally, if nothing else seems to work, you can use Jim Gibbs's Volume Adjusters, a collection of tiny freeware applications that alter the default sound output volume and alert sound volume. Just put the appropriate Volume Adjuster in the Startup Items or Shutdown Items folder in the System Folder, and it automatically sets the volume to what you'd like.

FIND JIM GIBBS'S Volume Adjusters on The Disc.



BLOWING OUT YOUR SPEAKERS with a volume control that keeps reverting to the maximum setting? Try trashing the Sound Preferences file.

Q I have your June '98 disk and I want to upgrade to Netscape Navigator 4.04. But I have two choices: 68K or PPC. I also see these choices for other programs on The Disc. Nowhere can I find what's the difference between these two, and what 68K and PPC mean. Please advise.

A It just goes to show you, something that's obvious to one person leaves another oblivious. The abbreviations you see refer to the two basic types of central processing units (CPUs) used in Macs over the years: Motorola's 68000 series (68K) and the PowerPC (PPC) designed by the Apple, IBM, and Motorola consortium.

In most cases, there's no functional difference between 68K and PPC versions of the same programs, so you should pick the one that matches the CPU inside your Mac. If your Mac has a PowerPC inside, install PPC versions of programs wherever possible for maximum speed. You could install and run 68K versions of the same programs, but they run in emulation mode, making them considerably slower than their PowerPC-native counterparts. If you have an older Mac with a 68000-based CPU, you must install the 68K versions of programs, as the PPC versions won't run on your Mac. You'll be presented with an alert box to that effect if you try.

One other notation you may see in a program's file name is the word "fat," which means the program contains both 68K and PPC code in a single file and consequently takes up more disk space than if the developer had released separate versions for each type of machine. So-called "fat binary" programs run on Power Macs and older Macs alike; the program knows what portions of the code to run based on the computer running it.

If you don't know what processor is inside your Mac, consult the technical documentation that came with your computer, or run Apple System Profiler (part of Mac OS 8).

Q Will my Power Mac with a G3 upgrade be compatible with Mac OS X?

A This sort of question never fails to make me laugh. Apple announces a new operating system that won't be released for well over a year, yet Mac addicts immediately start worrying about whether they can use it on their computers. People, people, when will you learn? First of all, let's keep in mind that Apple hasn't exactly been batting 1.000 when it comes to getting operating systems out the door. Can you say Pink, Taligent, Copland, and Rhapsody?

OK, giving Apple the benefit of the doubt and assuming Mac OS X (10) ships on time in the second half of 1999, why rush out to install it even if you can? Most likely there will be the usual compatibility problems running older software, first-revision bugs, and costs associated with buying upgrades from software vendors.

If you're still gung ho about the prospect of using Mac OS X before the year 2000 despite the potential problems, then all you need concern yourself with are its requirements, which are understandably up in the air and subject to change. Apple has said that it will "certify" Mac OS X for the G3 processor only. Skeptical journalists such as myself take this to mean that it may well work on older Macs based on PowerPC 603 and 604 CPUs, but that Apple will neither guarantee it nor provide support for users of such machines who attempt to use Mac OS X.

As for Macs in which a G3 daughtercard upgrade has replaced the original PowerPC 604, the current belief is that if Rhapsody supported the motherboard, then Mac OS X should work with the G3 upgrade. However, Apple will likely consider it an unsupported, noncertified system. This is similar to what Apple recently announced in regard to Mac OS 8.5, which will probably work fine on Macs upgraded with a PowerPC processor, although Apple won't support such systems.

Q I'm about to purchase a PowerBook 2400, and while looking at the specifications sheet, I noticed that it has an infrared port that supposedly allows you to connect to other infrared-capable devices. I checked the Web for a few hours and couldn't find a single infrared transceiver for a desktop Mac. So what good is the infrared port on the new PowerBooks?

A You must have been looking in the wrong place. I popped on over to the Mac OS

Software & Hardware Guide (http://www.mac-software.apple.com) and located a few infrared devices after performing a quick keyword search. Granted, the pickings are slim. The Farallon AirDock Adapter from Netopia (800-485-5741 or 510-814-5000, http://www.farallon.com/product/infrared/airdock.html) seems to do what you want. It's a small infrared transceiver that plugs into a free serial port on a desktop Mac, thus giving you the ability to network without cables. Personally, I don't see the real benefit of using this device. The two Macs must be within six feet of each other with a direct line of sight to maintain the wireless connection, which maxes out at 230.4 kbps—the same speed as a LocalTalk cable connection, but significantly slower than an Ethernet connection.

If anybody out there has discovered a practical or novel use for the infrared port, please drop me a line so that I can share your experiences with other readers.

Q I now have a new Power Mac G3, which I dearly love. The computer came with a small, 80-page troubleshooting guide, but I would like a Mac OS 8 manual to go with it as I am a visual person and prefer being able to refer to a printed manual whenever I have a question. How can I get a Mac OS 8 manual?



WHEN BAD THINGS HAPPEN to a good Mac, MacFixIt is the place to go. (MacFixIt is a member of the MacAddict Network.)

A Catch a bitchin' wave and surf on over to Apple's Product Documentation Archive (http://support.info.apple.com/manuals/manuals.qry), where you can download some, but not all, user manuals as PDF files you can view or print with Adobe Acrobat (http://www.adobe.com/prodindex/acrobat). Be forewarned, however, that the only printed material included with the retail Mac OS 8 package is a 50-page installation manual. This is available online, but it won't be of much use to you since Mac OS 8 is already installed on your Power Mac. If you want more information on Mac OS 8, point your browser to Amazon.com (http://www.amazon.com) and search for *Mac OS 8*. You'll find a slew of books on the subject. My choice is the third edition of Ted Landau's classic help guide, *Sad Macs, Bombs, and Other Disasters*. This 964-page monster doesn't specifically cover Mac OS 8, but most of the material is applicable to the Mac's latest operating system, and Landau maintains an up-to-date Web site for late-breaking issues at MacFixIt (http://www.macfixit.pair.com).

Q If I install a G3 daughtercard with backside cache in my Power Mac 8500, would it be worthwhile to upgrade my level 2 cache?

A No. Actually, it's probably best to remove the L2 cache altogether, as it may cause stability problems and won't affect the speed of your system.

A little background for those unfamiliar with the cache concept: Caches hold recently accessed data in relatively small and fast memory, from which the CPU can retrieve data more quickly than from standard memory. All PowerPC chips have level 1 caches built directly into the CPU. L1 caches can neither be turned on and off nor expanded. Many Power Mac models also have an L2 cache slot on the motherboard that an L2 module, typically 256K to 1MB, can fill. Adding an L2 cache can boost speed anywhere from 10 to 25 percent.

Many of the high-speed daughtercard upgrades now come with inline or backside caches, both of which are significantly faster than conventional L2 caches. Because these caches are faster than conventional L2 caches and perform the same function, an L2 cache on the motherboard is superfluous and may even be troublesome. At the higher speeds processor upgrades offer, many marginal L2 caches misbehave. For that reason, if you're installing a CPU upgrade, it's usually a good idea to remove or disable any L2 cache installed in your Mac.



IN THE DAYS BEFORE THE G3, level 2 cache looked like this.

Photo by Aaron Lauer

Owen W. Linzmayer (askus@macaddict.com, http://www.netcom.com/~owenink) is a San Francisco–based freelance writer and the author of *The Mac Bathroom Reader*. Please submit technical questions or helpful tips directly via email or c/o *MacAddict*, 150 North Hill Dr. #40, Brisbane, CA 94005.



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Cable included with printers above

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Power PC G3/233MHz/32MB RAM
4GB Hard Drive/24X CD-ROM
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$1,399! #34236(desktop)

Power Mac G3 Systems Available from MacMall

#34237 Power Mac G3 Desktop/266MHz/32MB RAM 4GB Hard Drive/24X CD-ROM/Zip Drive — *was* $1,999 *Now only* $1,699

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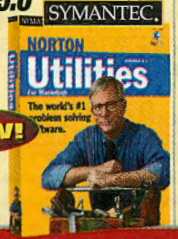
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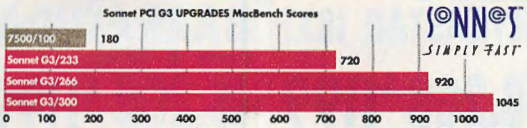
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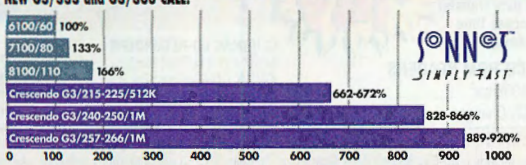
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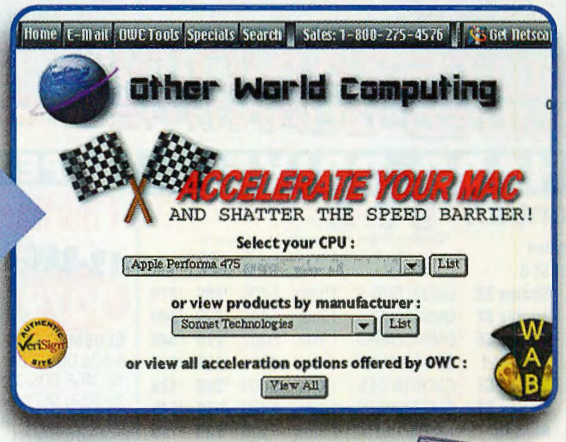
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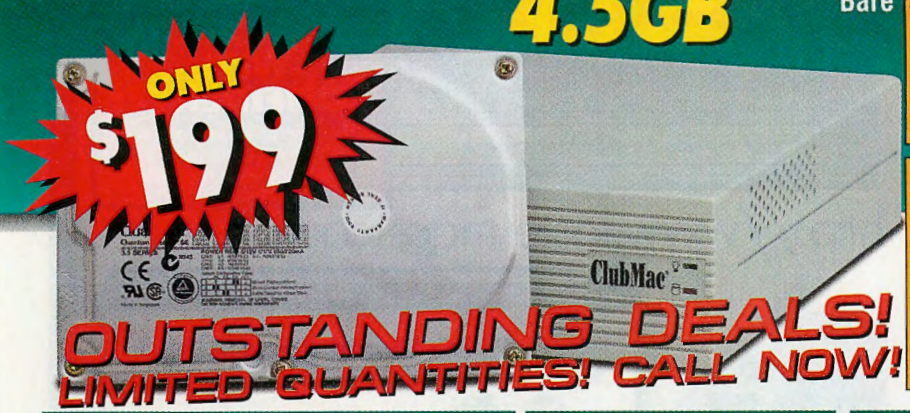
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4.5GB Viking	QM34550VKS	8ms	7200	$199	$269
6.4GB Stratus SE	QM36480SES	10ms	5400	$359	$429
8.4GB Stratus SE	QM38420SES	10ms	5400	$479	$549
9.1GB Atlas III	QM309100TDS	7.8ms	7200	$729	$799
18.2GB Atlas III	QM318200TDS	7.8ms	7200	$1249	$1319
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9.1GB Atlas III	QM309100TDLW	7.8ms	7200	$779	$869
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9.1GB Cheetah	ST19101N	7.7ms	10000	$799	$869
18.2GB Barracuda 18	ST118273N	7.1ms	7200	$1199	$1269
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- M700 17", 1024x768 .28 dot pitch $599
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- P1150 21", 1360x1024 .28 dot pitch $1349

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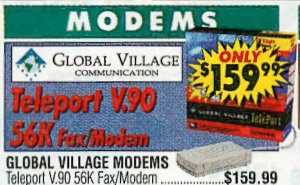
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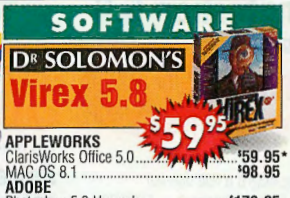


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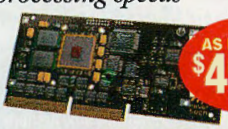
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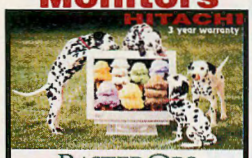
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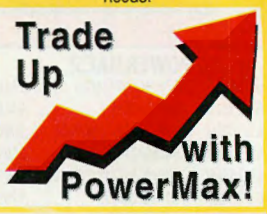
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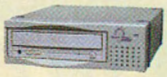
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9100MB	10,000rpm	1024K	ST39102LW	5yr	$759	$869
9190MB	10,000rpm	1024K	ST39173LW	5yr	$645	$755
18200MB	7200rpm	1024K	ST118273LW	5yr	$1159	$1269
18200MB	10,000rpm	1024K	ST118202LW	5yr	$1369	$1479

IBM

4550MB	5400rpm	512K	IBM34330N	5yr	$249	$309
9100MB	7200rpm	512K	IBM39130N	5yr	$549	$609
18200MB	7200rpm	1MB	IDGHS18Z	5yr	$1279	$1339
ULTRA WIDE SCSI						
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RAID



These preconfigured RAIDs can be run in RAID 0 or 1 mode. The capacity listed is for RAID 0 configuration. In RAID 0, the data is striped across a pair of drives. This is perfect for digital video such as Media 100, TrueVision, Avid, or other applications that require extremely high data transfer rates.

Includes - Ultra 2 LVD SCSI drives - Adaptec PCI Ultra-2 SCSI controller - Adaptec Remus Lite RAID software - Necessary cables

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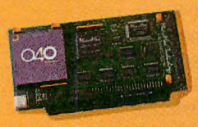
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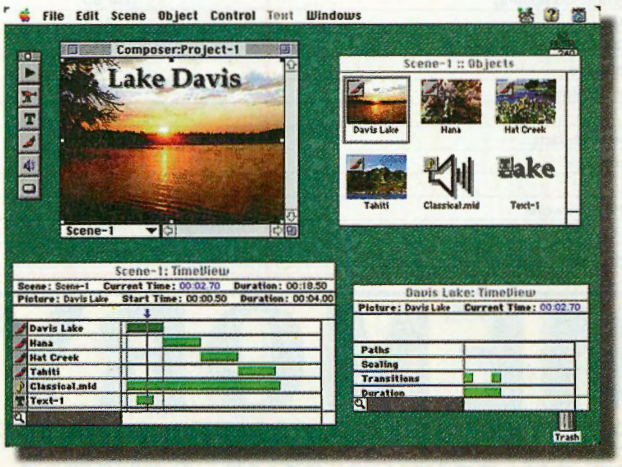
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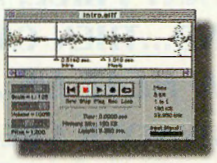
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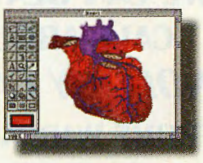




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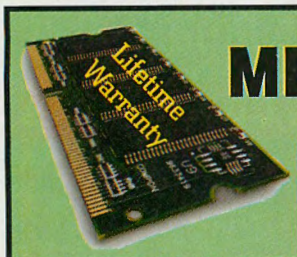
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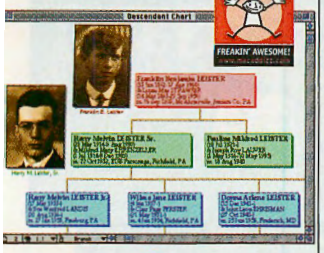
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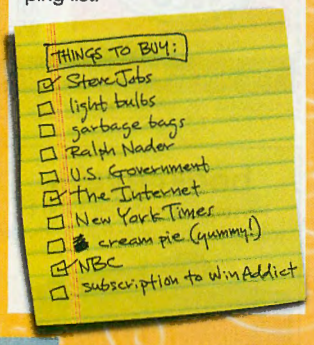
Apple: The Series

Variety magazine reported that Tom Hanks will host an HBO special on the history of Apple Computer. We've heard rumors that if the show is a hit, it could be spun off into a series to fill the gaping hole "Seinfeld" left in NBC's "Must-See TV" Thursday night lineup. Although plans to relaunch a version of "The Fall Guy" starring ex-Apple CEO Gil Amelio never made it past a costly failed pilot, the following potential titles for the Apple series have already leaked to the press:

- iMac about You
- Are You Being Steved?
- Apple: The NeXT Generation
- The OSX Files
- USB Watch
- Stevie's Wonder Years
- The $101 Million Profit Man

BILL GATES'S SHOPPING LIST

Once again, Bill Gates has topped *Forbes* magazine's list as the richest man in the world. How does the mega-billionaire spend all that dough? Take a sneak peek at the man's never-before-published personal shopping list:



MacAddict Corrections

✔ July's fat-free "WOW!" cover was supposed to carry the Olean warning as the FDA requires. We apologize for any intestinal discomfort that may have erupted as a result of this omission.

✔ Senior Editor Robert "Prison Guy" Capps actually hails from *Prism* magazine, not from prison, as was originally reported. Sorry.



✔ Reader Christopher Udy informed us that the Macintosh G3 shown on page 44 of our July issue is not, as we called it, "the ultimate Tower of Power." In fact, the real Tower of Power is shown here. Thanks, Christopher, for pointing out this mistake.

✔ In last month's investigative report, "Silicon Valley Hero or Hoax?", we forgot to mention Steve Jobs, Java, Carbon, the iMac, dogcows, Cheryl England, Donald T. Echler and his dog Ike, Mac OS X, the Internet, Milli Vanilli, garage.com, USB, PPO, SFPD, and ASAP. Oops.

✔ The MacAddict Hour on Imagine Radio (http://www.imagineradio.com) is a figment of our collective imagination. You didn't listen to it. You just thought you did. We apologize for the confusion.

YOU'VE GOT PORN!

America Online and Eastman Kodak announced a new online photo development service they're calling "You've Got Pictures," a play on AOL's trademark "You've Got Mail" voice alert. The service is based on a similar joint venture between AOL and various Internet spammers called "You've Got Dirty Pictures" that has been operating successfully for years.

we can't Wait

Windows 98 hit the shelves, and once again pathetic PC droids lined up to be the first to get their hands on the mediocre update fresh upon its midnight release. Obviously these people wouldn't know a good time if it ran up to them and punched them in the stomach. As a service to the Wintel world, we've come up with a list of activities that would be much more enjoyable than waiting in line for Windows:

- A cozy evening at San Francisco's The Stud with Trent Lott
- A live reading of the Windows 98 instruction manual by Bill Gates (in the nude)
- Plucking out all your fingernails and peeling an orange
- Having Steve Jobs give you your annual performance review
- A cow pie eating contest
- Front row at a Meat Loaf concert (in the nude)
- A cozy evening with Esther Dyson's fascinating and insightful book, *Release 2.0*
- A messy bout of botulism
- Listening to a Webcast of people standing in line to buy Windows 98
- Going to Mexico and drinking the water
- Sharing a deserted island with Bill Clinton and Kenneth Star (in the nude)
- Brain surgery
- A refresher course in BASIC
- Sending all of your ex-boyfriends Freeverse Software's Virtual Viagra
- Making "practice" PowerPoint presentations—just in case
- Going through each issue of *MacAddict* and counting how many times we use the word *cool*, because it would be so cool to do
- Reading all that spam mail you've let build up
- Looking for love in all the wrong places
- Making up funny jokes about what AOL really stands for and then emailing them to all your friends
- Stuffing a pillow under your shirt and running around the house spouting off about Apple, pretending to be a Macintosh pundit
- Creating your own suite of official benchmark tests and then complaining to yourself about how bogus they are
- Contemplating the deep irony of the book title, *Windows 98 for Dummies*



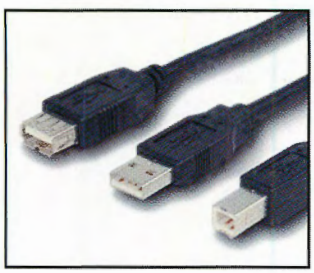
IN A PHANTOM REFLEX, MAGDA ATTEMPTS TO COMMAND-OPTION-ESCAPE HER WAY OUT OF HER BLIND DATE.

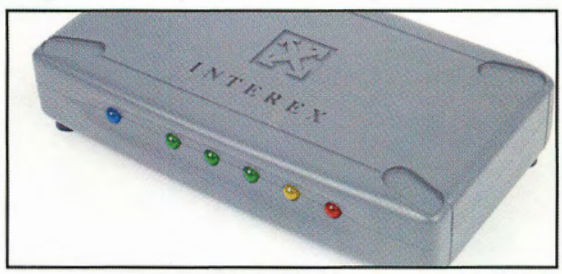
Doodle by Mark Simmons

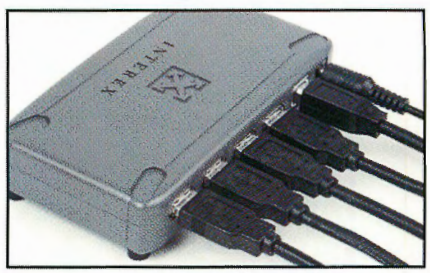
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